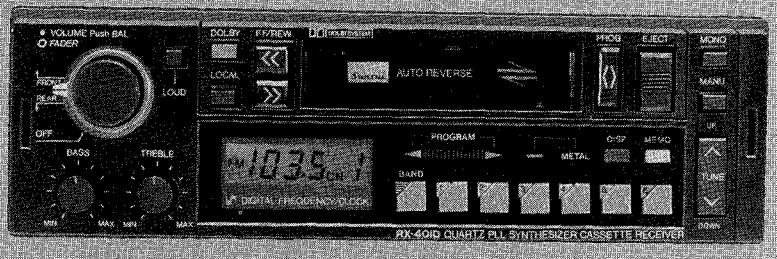
RX-4010/4010L/4010F
RX-3010/3010L/3010F

# SERVICE MANUAL

## QUARTZ PLL SYNTHESIZER CASSETTE RECEIVER

# SANSUI RX-4010/4010L /4010F RX-3010/3010L /3010F




Sansui

SANSUI ELECTRIC CO., LTD.

## •SPECIFICATIONS

### •Audio section

**<RX-4010/4010L/4010F/3010L/3010F>**

**Maximum output power**.. 20 watts per channel into 4 ohms (1 kHz)
**Rated output power**..... 16 watts per channel into 4 ohms (1 kHz, 10% total harmonic distortion)
**Load impedance**..... 4 ohms
**Total harmonic distortion** less than 0.1% at 5 watts
**Circuit system**..... OCL-BTL system
**Input sensitivity and impedance** (1 kHz)
LINE IN..... 75 mV/47k ohms
**Output voltage**
PRE OUT..... 150 mV (30% MOD)
<RX-4010/4010L/4010F>
**Signal to noise ratio**
(A network)..... 75 dB
**Frequency response**..... 30 to 30,000 Hz±3 dB
**Controls**
BASS/TREBLE..... ±10 dB at 100 Hz/10 kHz
LOUDNESS..... +8 dB at 100 Hz
+6 dB at 10 kHz
(VOLUME: −30dB)

**<RX-3010>**

**Maximum output power**.. 6 watts per channel into 4 ohms (1 kHz)
**Rated output power**..... 5 watts per channel into 4 ohms (1 kHz, 10% total harmonic distortion)
**Load impedance**..... 4 ohms
**Total harmonic distortion** less than 0.1% at 2 watts
**Signal to noise ratio**
(A network)..... 75 dB
**Frequency response**..... 30 Hz to 30,000 Hz±3 dB
**Controls**
BASS/TREBLE..... ±10 dB at 100 Hz/10 kHz
LOUDNESS..... +8 dB at 100 Hz
+6 dB at 10 kHz
(VOLUME: −30dB)

### •Tape section

**Track format**..... 4-track/2-channel system
**Tape speed**..... 4.8 cm/sec.
**Play back head**..... Hard Permalloy, 4-track
**Wow/flutter**..... 0.15% max. (WRMS)
**Frequency response**
Normal (LH) tape..... 40 to 14,000 Hz±3 dB
Metal tape..... 40 to 16,000 Hz±3 dB
**Signal-to-noise ratio** (with metal tape, A network)
RX-3010/3010L/3010F.. Better than 55 dB (5 kHz)
RX4010/4010L/4010F... Better than 63 dB
(Dolby NR on, 5 kHz)

### •Tuner section

**(FM)**
**Tuning range**..... 88 to 108 MHz
**Usable sensitivity**
Mono IHF..... 14.8 dBf (1.5 μV/75 ohms)
**50 dB quieting sensitivity**
Stereo..... 18.4 dBf
**Signal to noise ratio** (at 65 dBf)
Stereo/mono..... 65 dB/70 dB
**Stereo separation**..... 35 dB at 1 kHz

**<RX-4010/RX-4010F/3010/3010F>**
**(AM)**
**Tuning range**..... 531 to 1,600 kHz
**Usable sensitivity**..... 30 μV/75 ohms at 1,000 kHz
**Signal to noise ratio**..... 45 dB

to be continued ►

**< RX-4010L/3010L >**
**(MW)**
**Tuning range**..... 531 to 1,600 kHz
**Usable sensitivity** ..... 30 μV/75 ohms at 1,000 kHz
**Signal to noise ratio** ..... 45 dB
**(LW)**
**Tuning range**..... 153 to 281 kHz
**Usable sensitivity** ..... 35 μV/75 ohms at 200 kHz
**Signal to noise ratio** ..... 45 dB

## •General

**Power requirements** ..... DC 12.0V/Rated: 14.4V
(Usable: 10.8 ~ 15.6V)
negative ground

**Current consumption**
RX-3010..... 2A Maximum
RX-4010/4010L/4010F/3010L/3010F
..... 3.8A Maximum
**Dimensions** (WxHxD)..... 187x57x182 mm
(7-3/8"x2-1/4"x7-3/16")
Chassis size ..... 179x50x150 mm
(7-1/16"x2"x5-15/16")
**Weight** (net)
RX-3010..... 1.3 kg (2.9 lbs)
RX-4010/4010L/4010F/3010L/3010F
..... 1.4 kg (3.1 lbs)

* Design and specifications subject to changes without notice for improvements.
* Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.
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# CAUTION

1. The symbols, SA and XX on the parts list and the schematic diagram mean followings respectively.
   SA ..... Manufactured for South African market.
   XX ..... Standard Version.
   NON MARK .... Common Parts.

2. Some printed circuit boards are not supplied as the assembled.
   To separate these in this service manual, the stock No's are not indicated at the ends of the board names. However, the individual parts on the circuit boards are provided by orders.

3. Since some of capacitors and resistors are omitted from parts lists in this service manual, refer to the Common Parts List for capacitors & resistors, which was issued on February 1983.

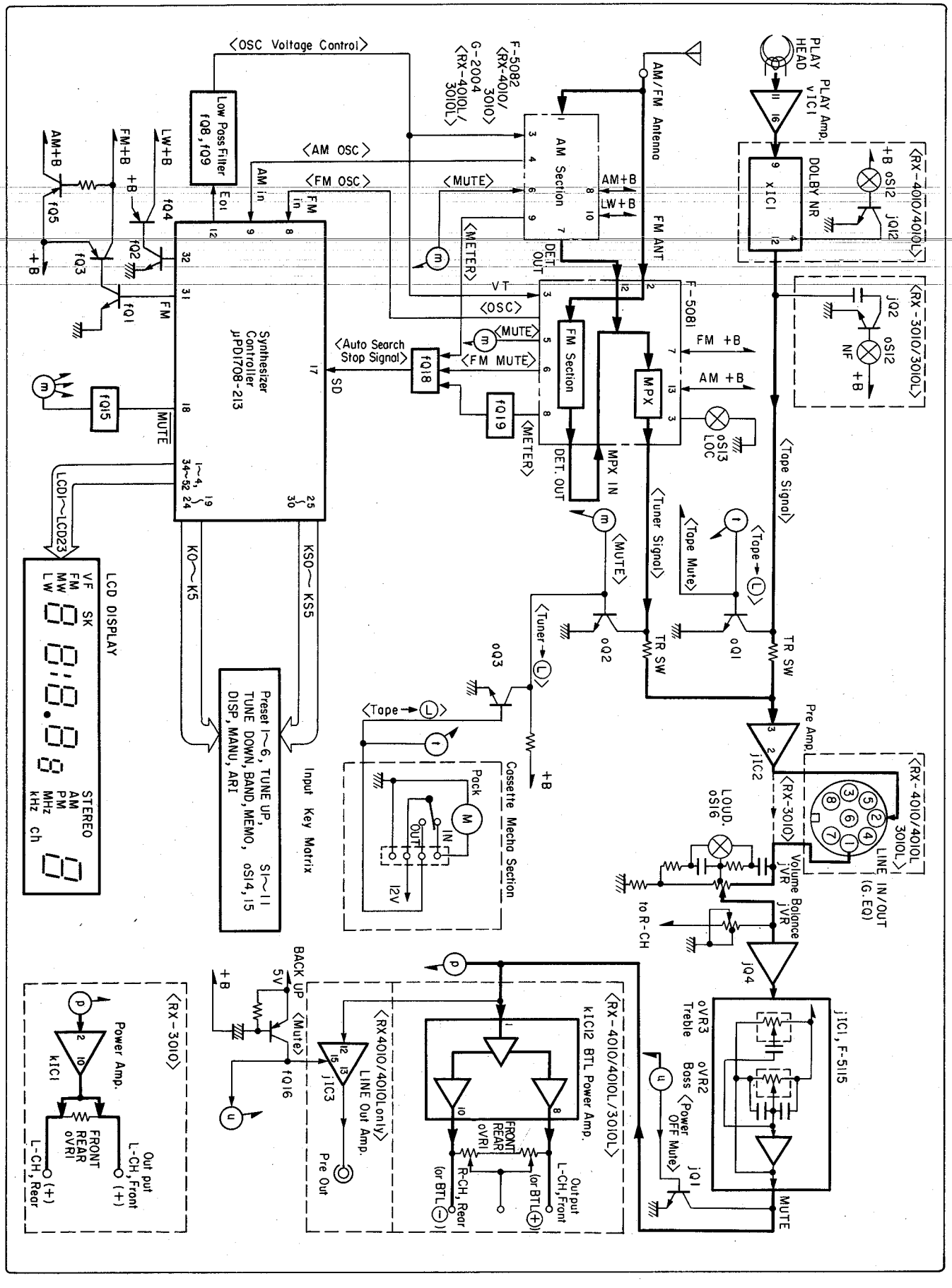
4. Abbreviations in this service manual are as follows.

### •Abbreviations List

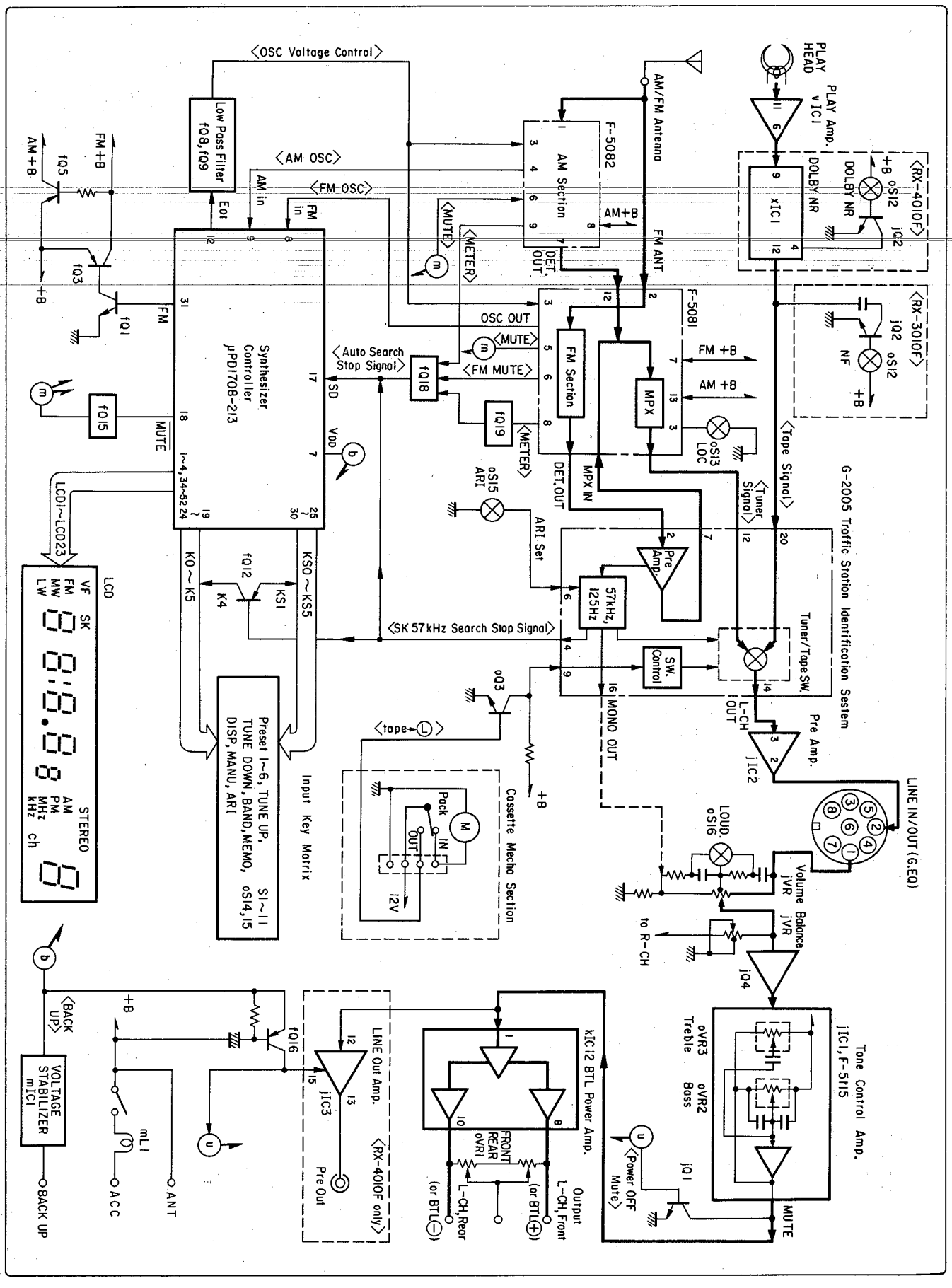
| | |
|---|---|
| C.R. | : Carbon Resistor |
| S.R. | : Solid Resistor |
| Ce.R. | : Cement Resistor |
| M.R. | : Metal Film Resistor |
| F.R. | : Fusing Resistor |
| N.I.R. | : Non-Inflammable Resistor |
| A.R. | : Array Resistor |
| C.C. | : Ceramic Capacitor |
| C.T. | : Ceramic Capacitor, Temperature Compensation |
| E.C. | : Electrolytic Capacitor |
| E.L. | : Low Leak Electrolytic Capacitor |
| E.B. | : Bi-Polar Electrolytic Capacitor |
| E.B.L. | : Low Leak Bi-Polar Electrolytic Capacitor |
| Ta.C. | : Tantalum Capacitor |
| F.C. | : Film Capacitor |
| M.P. | : Metalized Paper Capacitor |
| P.C. | : Polystyrene Capacitor |
| G.C. | : Gimmic Capacitor |
| A.C. | : Array Capacitor |
| V.R. | : Variable Resistor |
| S.V.R. | : Semi Variable Resistor |
| SW. | : Switch |
| Chip R. | : Chip Resistor |
| Chip C. | : Chip Capacitor |

# 1. BLOCK DIAGRAM

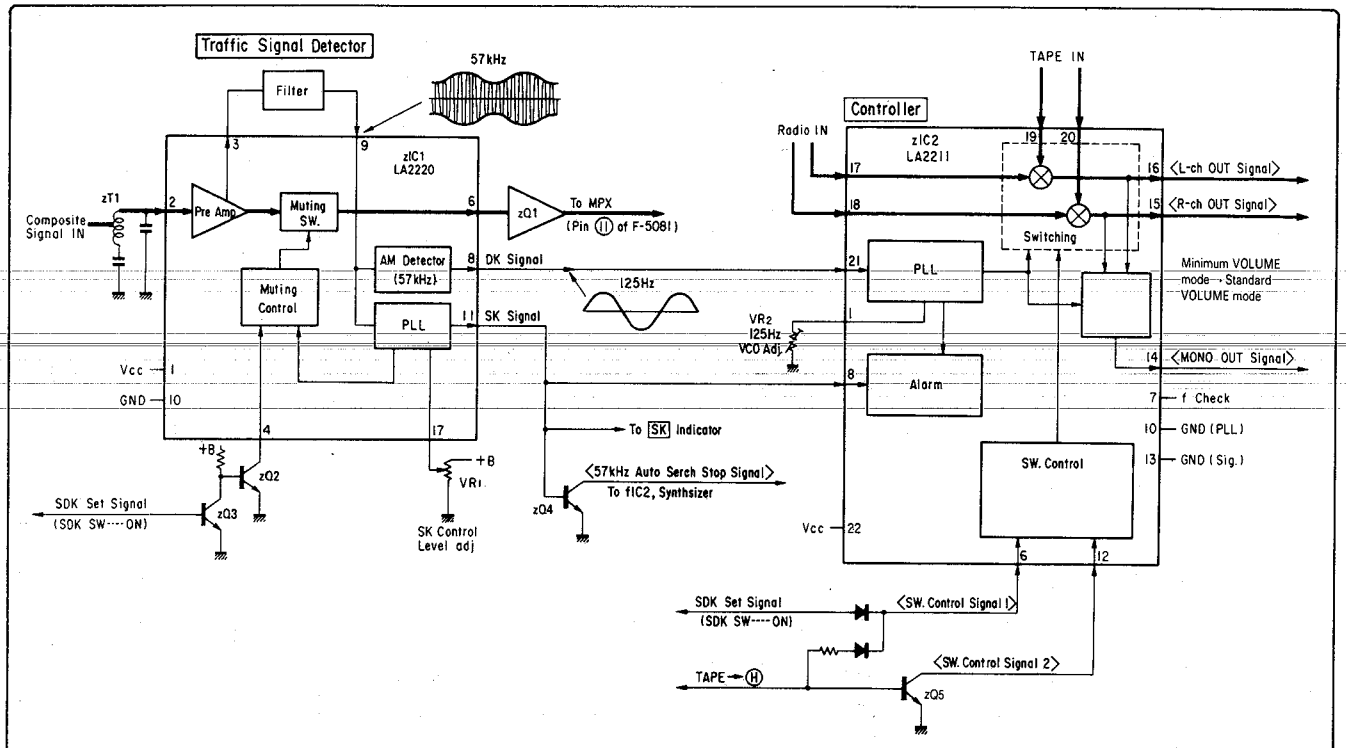
## 1-1. RX-4010, 4010L, 3010 & 3010L Model



## 1-2. RX-4010F & 3010F Model



## 1-3. Traffic Station Identification System Block Diagram (This diagram is applied to the RX-4010F and RX-3010F)




**Note:** Traffic information reception

In U.S.A., West Germany, Luxembourg, Austria and Switzerland, particular FM stations broadcast useful traffic information at regular intervals for drivers in the respective areas. The name and frequencies of the station broadcasting traffic information in various areas are available from the billboards beside the roads in those areas. Also, these stations always transmit discriminating (SK) signals to identify themselves as traffic information broadcasting stations. Monitoring these SK signals, the unit can select and pick up only those stations.

# 2. OPERATION OF CASSETTE MECHANISM

## 2-1. FWD PLAY & REV PLAY Operation

Fig. 2-1 (Bottom Plate Side)

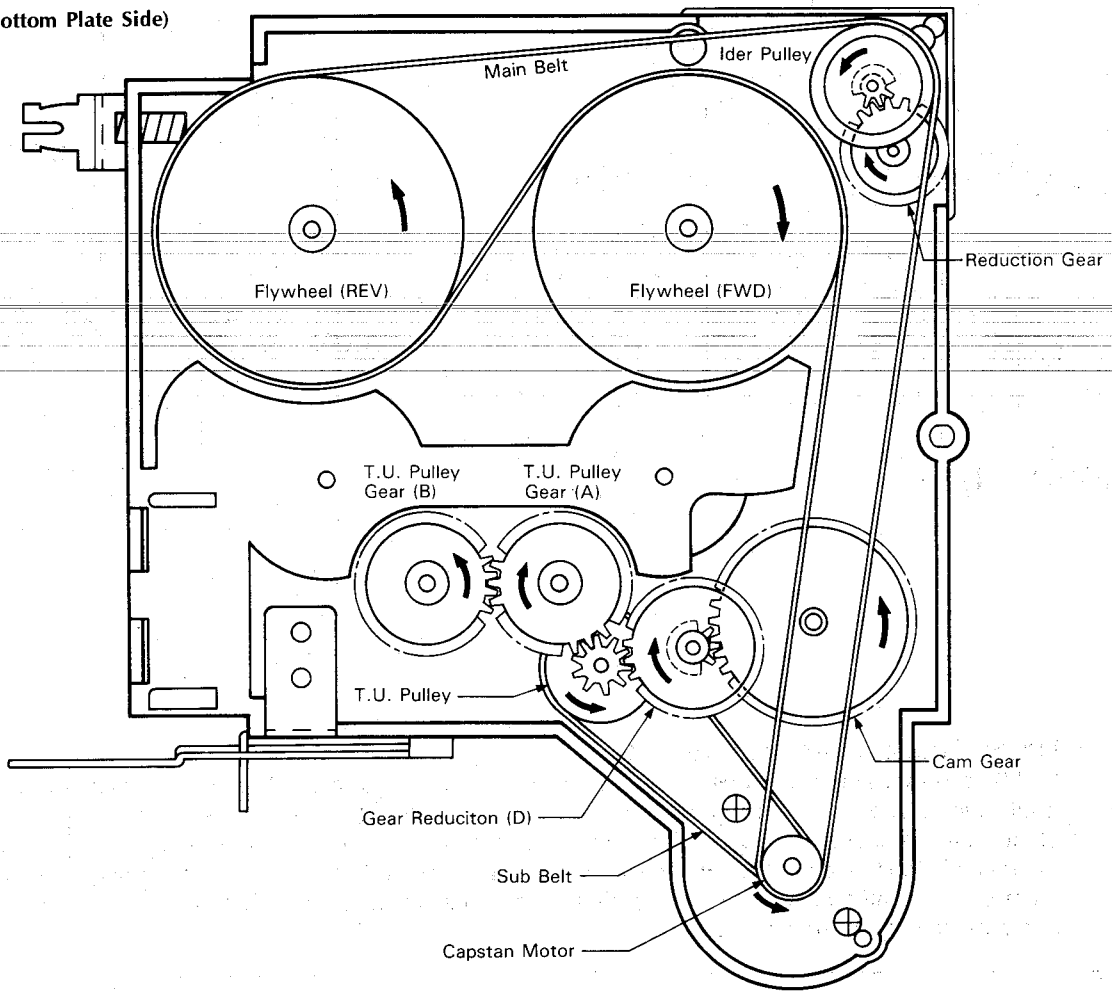
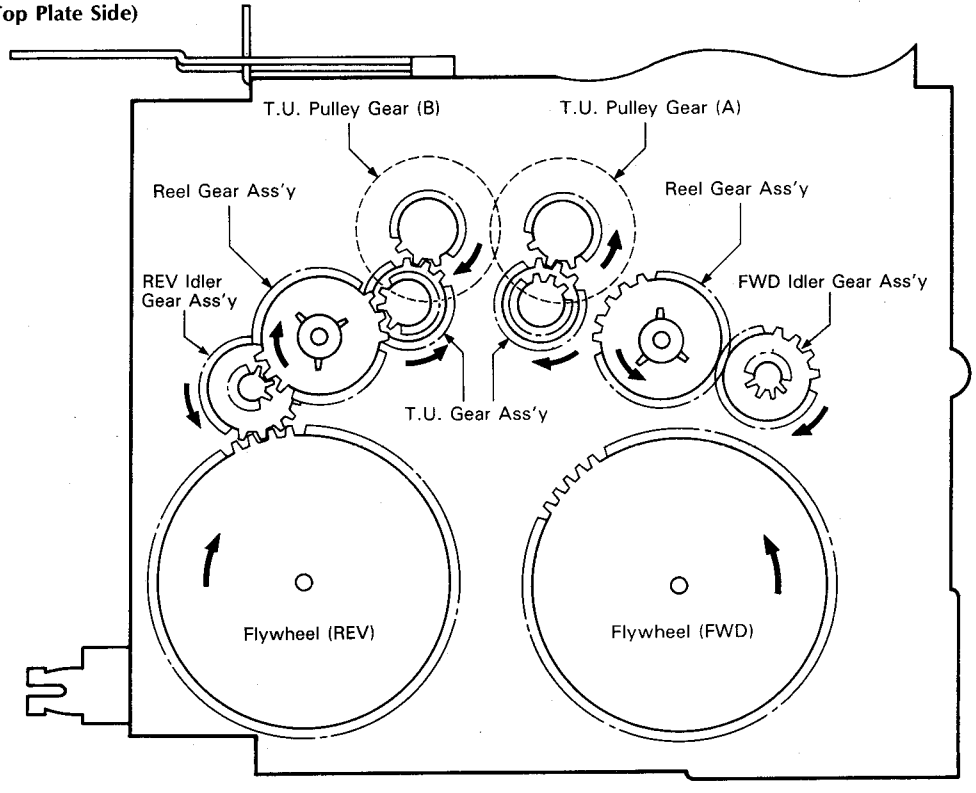



Fig. 2-2 (Top Plate Side)



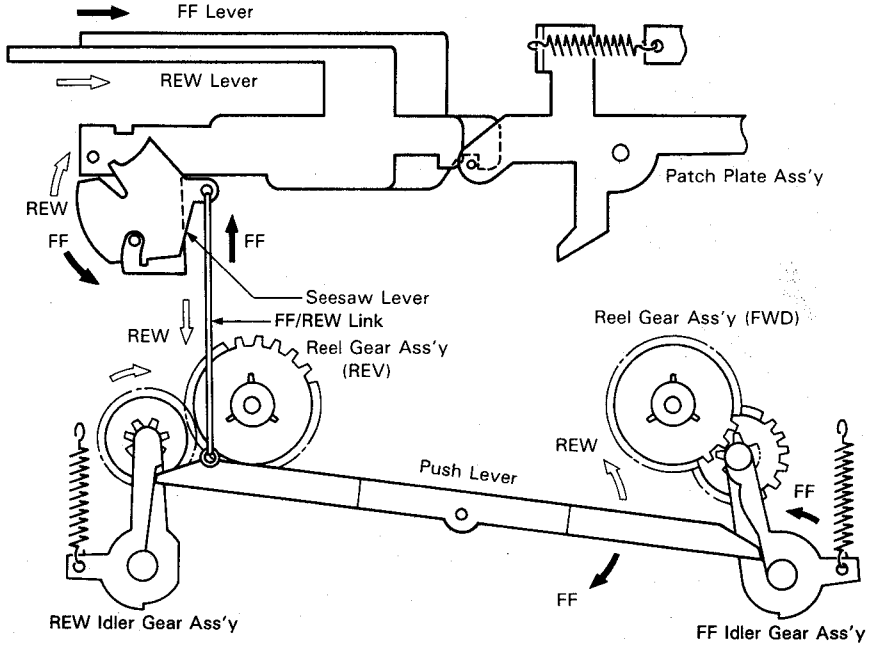
## •Torque Transportation Flowchart (Fig. 2-1 and Fig. 2-2)

Capstan Motor
↓
Sub Belt
↓
T.U. Pulley
↓
(a) → Page 7
↓
T.U. Pulley Gear (A)
↓
T.U. Pulley Gear (B)
↓
T.U. Gear Ass'y
↓
Reel Gear Ass'y
**PLAY (FWD•REV)**
↓
Main Belt
↓
Idler Pulley
↓
(b) → Page 7
↓
Flywheel (REV)
↓
Flywheel (FWD)
**PLAY (FWD•REV)**
↓
REW Idler Gear Ass'y
↓
Reel Gear Ass'y (REV)
**REW**
↓
FWD Idler Gear Ass'y
↓
Reel Gear Ass'y (FWD)
**FF**

## 2-2. FF•REW Operation (Fig. 2-3)

FF•REW Lever
↓
Seesaw Lever
↓
FF/REW Link
↓
Push Lever
↓
FF•REW Idler Gear Ass'y

Fig. 2-3



## 2-3. Auto Reverse and PROGRAM Change Operation (Fig. 2-4 and Fig. 2-5)

**Auto Reverse**

- Friction Disk
- Detection Link Ass'y (REV)
- Detector
- Page 6 ← (a)
- Reduction Gear (D)
- Cam Gear
- Gear Arm Ass'y
- Auto PROGRAM Link

**PROGRAM Change**

- PROGRAM Lever
- PROGRAM Link
- PROGRAM Arm
- Ratchet
- Selector Gear Lever
- Page 6 → (b)
- Reduction Gear
- Selector Gear
- Linkage Selector
- Pinch Roller Ass'y
- Convert Arm
- T.U. Gear Ass'y

Fig. 2-4

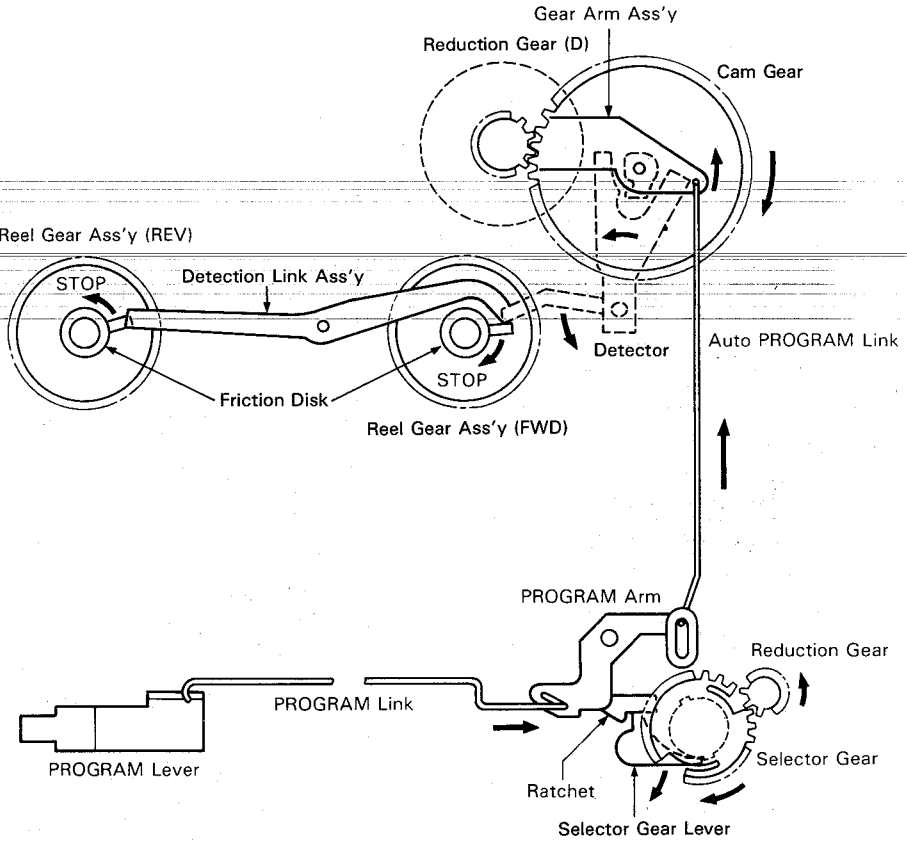
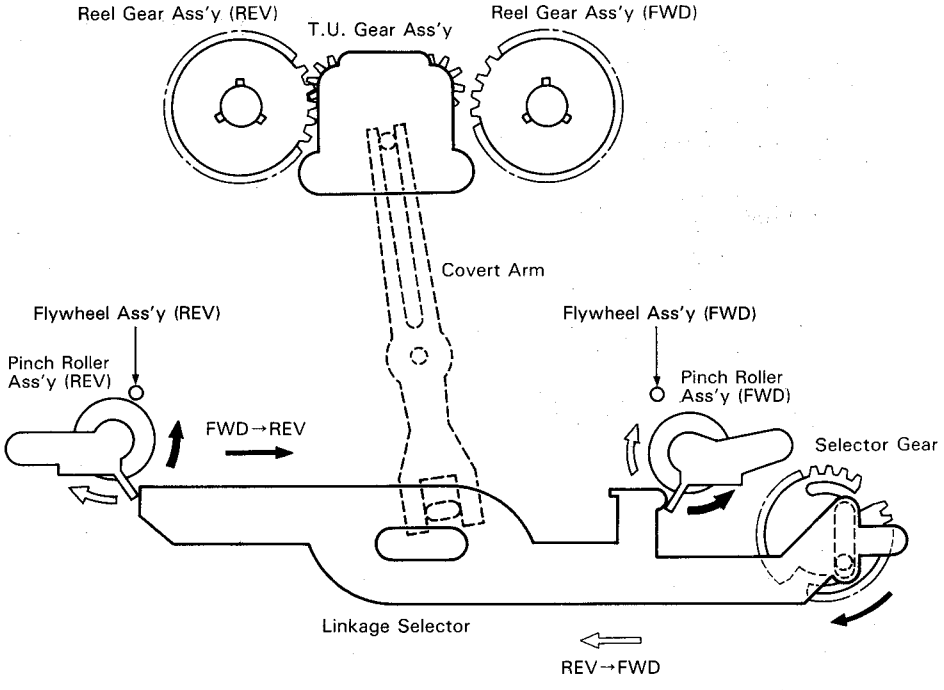



Fig. 2-5



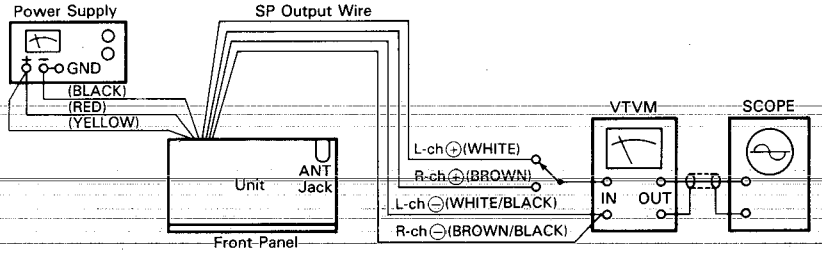
# 3. ADJUSTMENTS

## 3-1. Cassette Deck Adjustment

### 1) Head Azimuth Adjustment

**Note:** 1. Before this adjustment, clean P.B. head surface.
2. For this adjustment, use Sansui Test Tape, SCT-F10K.
3. Set the Dolby (or NF) switch to be OFF.
4. Set the tone control, the volume and balance controls to the mechanical center position.
5. Connections are shown in Fig. 3-1.

**Fig. 3-1**




| STEP | SUBJECT | MEASURE OUTPUT | SETTING | ADJUSTMENT | ADJUST FOR | REMARKS |
|---|---|---|---|---|---|---|
| 1. | P.B. Head Adj. | L or R-CH SP Output Wire VTVM and Scope | Playback the TEST TAPE SCT-F10K | Adjust the azimuth adjusting screw in Fig. 3-2. | MAX. Output both channels on FWD and REV PLAY | After this adjustment, lock the screw with paint. |

**Fig. 3-2**

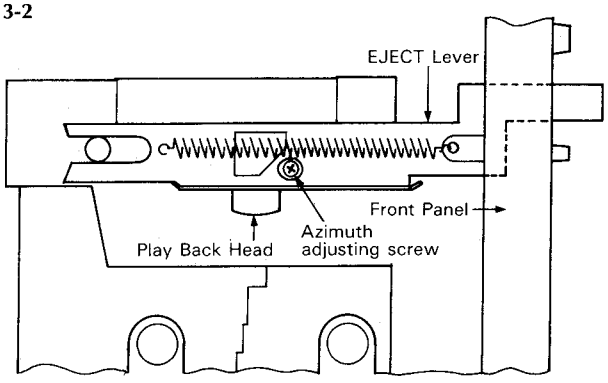
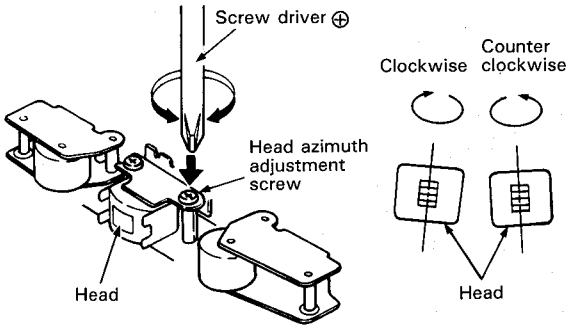



**Fig. 3-3**




### 2) Playback Adjustment

**Note:** 1. Before this adjustment, clean P.B. head surface.
2. For this adjustment, use Sansui Test Tape, SCT-L400.
3. Set the Dolby (or NF) switch to be OFF.

| STEP | SUBJECT | MEASURE OUTPUT | SETTING | ADJUSTMENT | ADJUST FOR | REMARKS |
|---|---|---|---|---|---|---|
| 1. | Playback Level Adj. | Point Ⓐ (Pin 2 of jIC1, F-5116) for L-CH, Point Ⓑ (Pin 8 of jIC2, F-5116) for R-CH & Earth VTVM and Scope | Playback (FWD) the TEST TAPE SCT-L400 | Adjust vVR1L for L-CH and vVR1R for R-CH (F-5116) | 110mV ± 2dB both channels on FWD and REV PLAY | See Fig. 3-7 on Page 11. |

## 3-2. Tuner Adjustment

**Fig. 3-4**

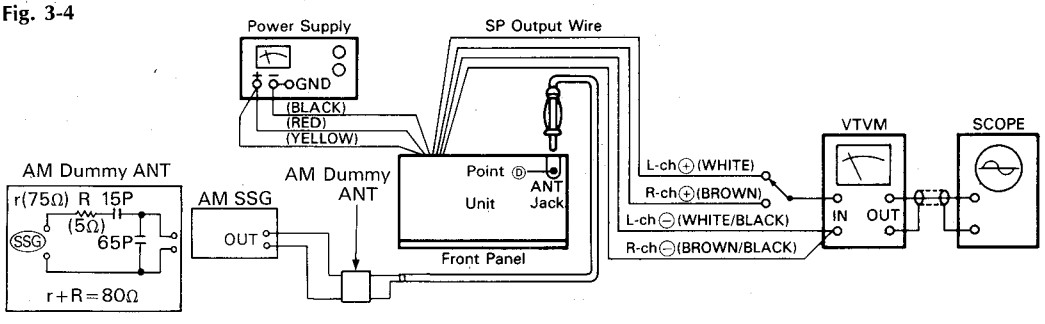
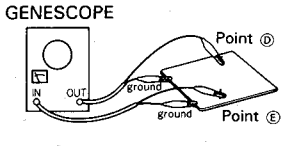



**Fig. 3-5**



## 1) AM Tuning & Reference Frequency Adjustment For RX-4010/3010/4010F/3010F (See Fig. 3-8 on page 11.)

**Note:** 1. SELECTOR ..... AM
2. Set the tone control, the volume and balance controls to the mechanical center position.
3. Connections are shown in Fig. 3-4, 3-5.

| STEP | SUBJECT | FEED SIGNAL FROM | FEED SIGNAL TO | MEASURE OUTPUT | ADJUST | ADJUST FOR | REMARKS |
|---|---|---|---|---|---|---|---|
| 1. | Reference Frequency Adj. | No Input | ——— | Between Point Ⓒ (Pin 4 of F-5082) through 100pF Capacitor & Earth Freq. Counter •See Fig. 3-7 on Page 11. | fTC1 (F-5116) | 1850kHz ± 10Hz | •Set the display to 1404kHz. |
| | | | | | | 1850kHz ± 10Hz | •Set the display to 1400kHz (10kHz step) |
| 2. | IF Coil Adj. | Genescope 450kHz Output 70dB | Point Ⓓ & Ground | Between Point Ⓔ (Pin 13 of eTC1) & Earth | eT4, eT5 (F-5082) | Max. Waveform | |
| 3. | 522kHz (or 520kHz) Tuning Adj. | No Input | ——— | Between Point Ⓕ (Pin 3 of F-5082) & Earth DC Volt Meter | eT3 (F-5082) | 1.2 ± 0.1V | •Turn the MW OSC coil (eT3) slowly. |
| | 1620kHz Tuning Adj. | Same as above | ——— | Same as above | eTC3 (F-5082) | 8.2 ± 0.1V | |
| 4. | 603kHz (or 600kHz) RF Adj. | 603kHz (or 600kHz) 30dB 400Hz (30% MOD.), AM SSG | ANT Jack or Point Ⓓ & Ground | L or R-CH SP Output Wire VTVM & Scope | eT1, eT2 (F-5082) | Max. Output | |
| 5. | 1404kHz (or 1400kHz) RF Adj. | 1404kHz (or 1400kHz) 30dB 400Hz (30% MOD.), AM SSG | Same as above | L or R-CH SP Output Wire VTVM & Scope | eTC1, eTC2 (F-5082) | Max. Output | |
| 6. | Auto Stop Level Adj. | 999kHz (9kHz Step) 1000kHz (10kHz Step) 45dB 400Hz (30% MOD.), AM SSG | Same as above | Digital Display | eVR1 (F-5082) | Tune the tuner to 999kHz (9kHz Step) or 1000kHz (10kHz Step) by using the Automatic Search tuning operation | •MANU.....OFF |

## 2) AM (MW) Tuning & Reference Frequency Adjustment For RX-4010L/3010L (See Fig. 3-9 on page 11.)

**Note:** 1. BAND ..... MW
2. Set the tone control, the volume and balance controls to the mechanical center position.
3. Connections are shown in Fig. 3-4.

| STEP | SUBJECT | FEED SIGNAL FROM | FEED SIGNAL TO | MEASURE OUTPUT | ADJUST | ADJUST FOR | REMARKS |
|---|---|---|---|---|---|---|---|
| 1. | Reference Frequency Adj. | No Input | ——— | Between Point Ⓒ (Pin 4 of G-2004) through 100pF Capacitor & Earth Freq. Counter •See Fig. 3-7 on Page 11. | fTC1 (F-5116) | 1854kHz ± 10Hz | •Set the display to 1404kHz (9kHz Step). |
| 2. | IF Coil Adj. | Genescope 450kHz Output 70dB | Point Ⓓ & Ground | Between Point Ⓔ (Pin 13 of eIC1) & Earth | eT7, eT8 (G-2004) | Max. Waveform | |
| 3. | 522kHz Tuning Adj. | No Input | ——— | Between Point Ⓕ (Pin 3 of G-2004) & Earth DC Volt Meter | eT5 (G-2004) | 1.2 ± 0.1V | •Turn the MW OSC coil (eT5) slowly. |
| | 1620kHz Tuning Adj. | Same as above | ——— | Same as above | eTC6 (G-2004) | 8.2 ± 0.1V | |
| 4. | 603kHz RF Adj. | 603kHz 30dB 400Hz (30% MOD.), AM SSG | ANT Jack or Point Ⓓ & Ground | L or R-CH SP Output Wire VTVM & Scope | eT1, eT2 (G-2004) | Max. Output | |
| 5. | 1404kHz RF Adj. | 1404kHz 30dB 400Hz (30% MOD.), AM SSG | Same as above | L or R-CH SP Output Wire VTVM & Scope | eTC1, eTC2 (G-2004) | Max. Output | |
| 6. | Auto Stop Level Adj. | 999kHz (9kHz Step) 45dB 400Hz (30% MOD.), AM SSG | Same as above | Digital Display | eVR1 (G-2004) | Tune the tuner to 999kHz (9kHz Step) by using the Automatic Search tuning operation | •MANU.....OFF |

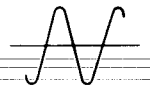
**•Abbreviations**

**Equipment**
**AM FM Generator Oscilloscope** ..... **Genescope**
**AM Standard Signal Generator** ..... **AM SSG**
**FM Standard Signal Generator** ..... **FM SSG**
**FM Stereo Generator** ..... **Stereo SG**
**Oscilloscope** ..... **Scope**
**Audio Oscillator** ..... **Audio Osc.**
**Distortion Meter** ..... **Dist. Meter**

**Others**
**Antenna** ..... **ANT.**
**Modulation** ..... **MOD.**
**Total Harmonic Distortion** ..... **T.H.D.**

## 3) LW Tuning Adjustment For RX-4010L/3010L (See Fig. 3-9 on page 11.)

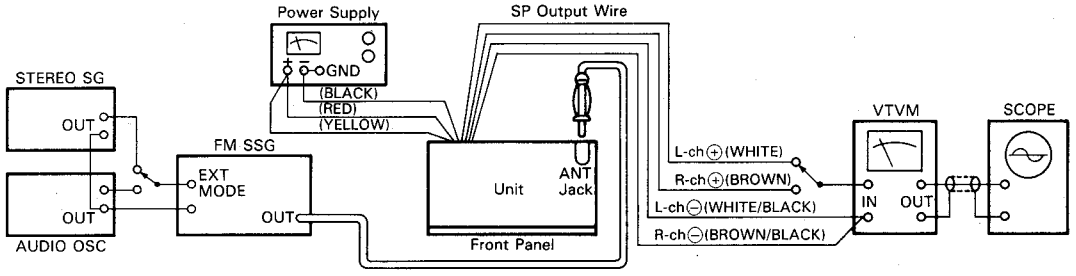
**Note:** BAND ..... LW

| STEP | SUBJECT | FEED SIGNAL FROM | FEED SIGNAL TO | MEASURE OUTPUT | ADJUST | ADJUST FOR | REMARKS |
|---|---|---|---|---|---|---|---|
| 1. | 155kHz Tuning Adj. | No Input | ——— | Between Point Ⓕ (Pin 3 of G-2004) & Earth DC Volt Meter | eT6 (G-2004) | 1.2V±0.1V | •Repeat procedures as stated in subject 1 & 2. |
| 2. | 281kHz Tuning Adj. | No Input | ——— | Same as above | eTC5 (G-2004) | 8.2V±0.1V | |
| 3. | 170kHz RF Adj. | 170kHz 30dB 400Hz (30% MOD.), AM SSG | ANT Jack or Point Ⓓ & Ground | L or R-CH SP Output Wire VTVM & Scope | eT3, eT4 (G-2004) | Max. Output |  |
| 4. | 260kHz RF Adj. | 260kHz 30dB 400Hz (30% MOD.), AM SSG | Same as above | L or R-CH Output Wire VTVM & Scope | eTC3, eTC4 (G-2004) | Max. Output | |

## 4) FM Adjustment (See Fig. 3-10 on page 11.)

**Note:** 1. BAND ..... FM
2. Set the tone control, the volume and balance controls to the mechanism center position.
3. FM MODE ..... MONO (STEP 1 & 2)
..... STEREO (STEP 3,4,5 & 6)
4. Connections are shown in Fig. 3-6.

**Fig. 3-6**




| STEP | SUBJECT | | FEED SIGNAL FROM | FEED SIGNAL TO | MEASURE OUTPUT | ADJUST | ADJUST FOR | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 1. | IF Coil Adj. | | 98MHz 20dBf (14.8dB), 1kHz (100% MOD.), FM SSG | ANT Jack or Point Ⓓ & Ground | Between Point Ⓒ (Pin 15 of dIC1) & Earth DC Volt Meter | IFT Coil (F-5081) | Max. DC Volt | •See Fig. 3-9 & 3-11 on Page 12. |
| 2. | Discriminator Coil Adj. | ① | No Input | ——— | Between TP-1 & TP-2 DC Volt Meter | dT1 (F-5081) | DC 0V±50mV | •Repeat procedures as stated in subject ① & ② |
| | | ② | 98MHz 65dBf (59.8dB), 1kHz (100% MOD.), FM SSG | ANT Jack or Point Ⓓ & Ground | L or R-CH SP Output Wire Dist Meter | dT2 (F-5081) | Min. THD | |
| 3. | Pilot Cancelling Adj. | | 98MHz 65dBf (59.8dB.), FM SSG, Pilot 19kHz (9% MOD.), STEREO SG. | Same as above | Between Point Ⓗ (Pin 5 of dIC4) & Earth SCOPE | dVR4 (F-5081) | Min. 19kHz Pilot signal level | |
| 4. | Separation Adj. | | 98MHz 65dBf (59.8dB) FM SSG, Pilot 19kHz (9% MOD.), L MODE 1kHz+Pilot (100% MOD.) STEREO SG. | Same as above | L-ch SP Output Wire VTVM & Scope | ——— | Read this indication on VTVM | |
| | | | | | R-CH SP Output Wire VTVM & Scope | dVR3 (F-5081) | —26~—35dB from the indication above. | Confirm L-CH→R-CH |
| 5. | Auto Noise Control Level Adj. | | 98MHz 45dBf (39.8dB), FM SSG, Pilot 19kHz (9% MOD.), L MODE 1kHz+Pilot (100% MOD.), STEREO SG. | Same as above | L-ch SP Output Wire VTVM & Scope | ——— | Read this indication on VTVM | |
| | | | | | R-ch SP Output Wire VTVM & Scope | dVR2 (F-5081) | —15dB from the indication above. | Confirm L-CH→R-CH |
| 6. | Auto stop Level Adj. For RX-4010/3010 | | 98MHz ANT Input 35dBf (29.8dB) 1kHz (100% MOD.) FM SSG | Same as above | Digital Display | dVR1 (F-5081) | Tune the tuner to 98MHz by using the automatic search tuning operation. | •MANU.....OFF |
| | Auto stop Level Adj. For RX-4010L/3010L/ 4010F/3010F | | 98MHz ANT Input 25dBf (19.8dB) 1kHz (100% MOD.) FM SSG | Same as above | Digital display | dVR1 (F-5081) | Tune the tuner to 98MHz by using the automatic search tuning operation. | •MANU.....OFF |
| 7. | SK Indicator lighting level Adj. For RX-4010F/3010F | | Station broadcasting traffic information is tuned in. | | SK Indicator | zVR1 (G-2005) | Light up indicator | •SDK Switch.....ON •See Fig. 3-11 on page 11. |
| 8. | 125Hz Free Run Adj. For RX-4010F/3010F | | ——— | ——— | TP1 (G-2005) through high impedance prove Freq. Counter | zVR2 (G-2005) | 125Hz | •SDK Switch.....ON •See Fig. 3-11 on page 11. |

## ◆Technical Hint for FM Adjustment

- The impedance of FM antenna terminal is 75Ω. Therefore, connect coaxial cable (3C-2V etc.) between FM SG and antenna terminal when wiring.
- There are two kind in indication of FM SG output attenuator
  1. Attenuator with marking of 75Ω open ... open indication type.
  2. Attenuator with marking of 75Ω load or close ... load or close indication type.
- FM SG output level in this FM adjustment are described as open indication type. The right table shows relations among FM SG attenuator indication (dB), available power ratio (dBf) and antenna terminal voltalge (dB/μV) in each indication type.
  close indication type.

| | FM SG Attenuator Indication | Available Power Ratio | Antenna Terminal Voltage |
|---|---|---|---|
| Open indication type | 0 dB<br>60 dB | 5.2 dBf<br>65.2 dBf | 6 dB/μV<br>66 dB/μV |
| Load or close indication type | 0 dB<br>54 dB | 11.2 dBf<br>65.2 dBf | 12 dB/μV<br>66 dB/μV |

**Fig. 3-7**
**F-5116 Main Board**

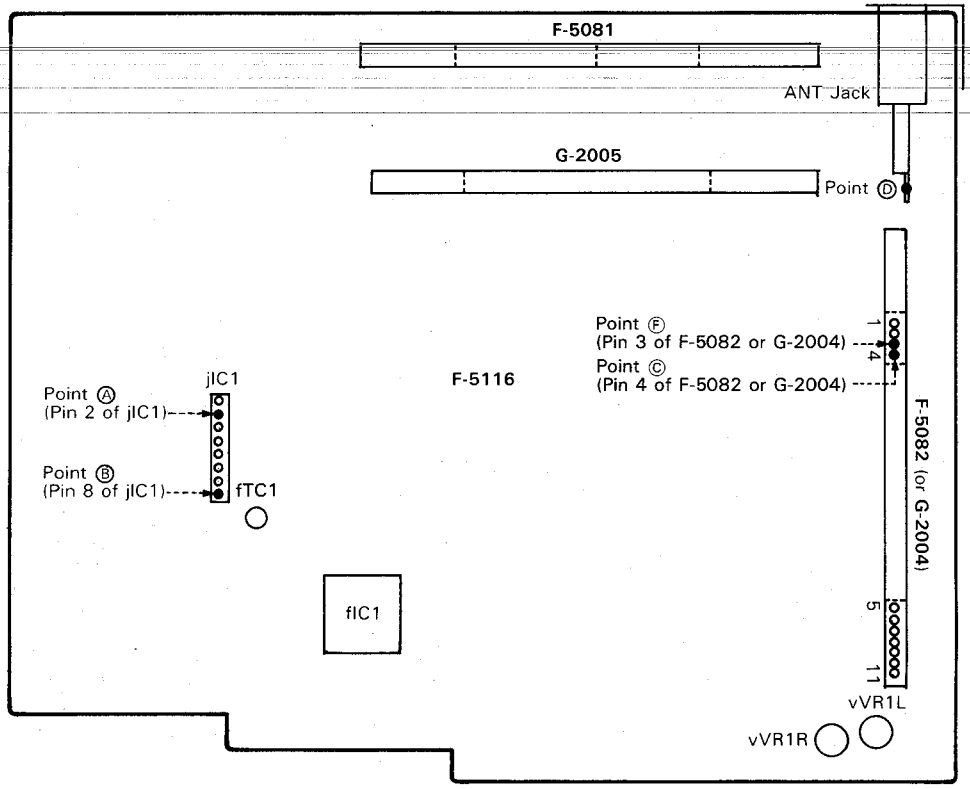



**Fig. 3-8 F-5082 AM Board for RX-4010/4010F/3010/3010F**

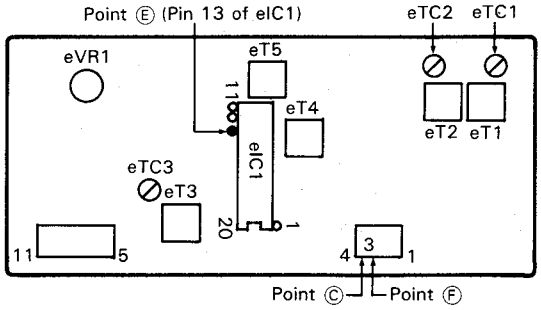



**Fig. 3-9 G-2004 AM Board for RX-4010L/3010L**

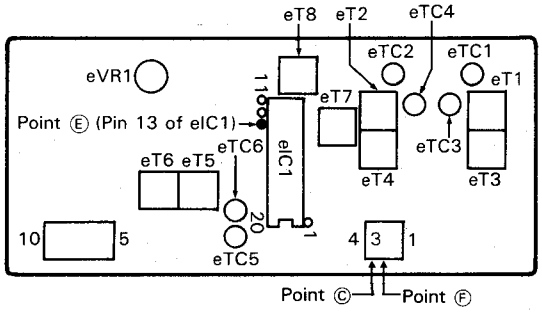



**Fig. 3-10 F-5081 FM Board**

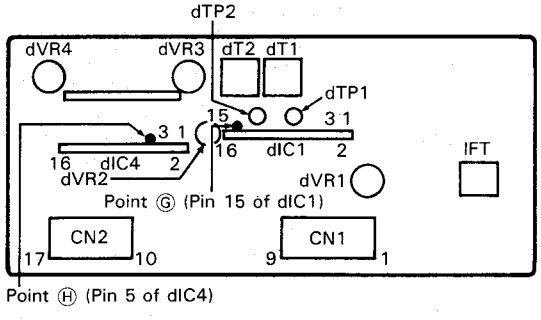
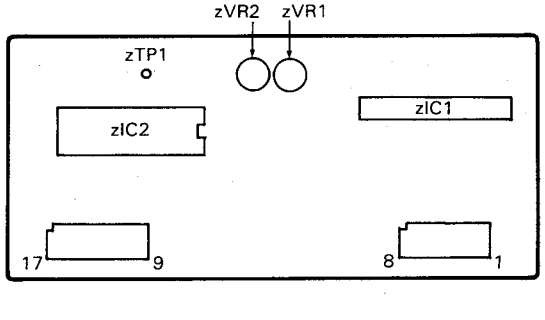


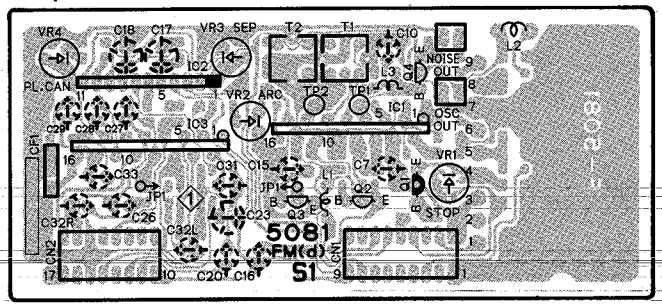

**Fig. 3-11 G-2005 SDK Board for RX-4010F/3010F**



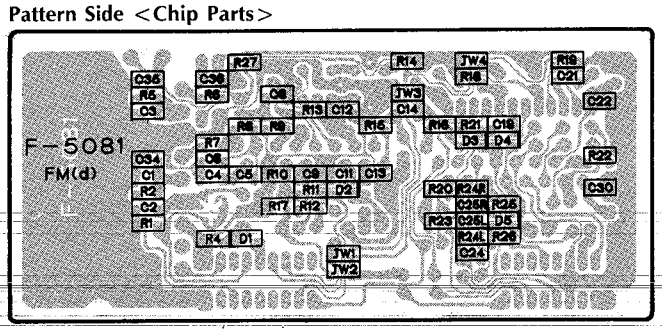
# 4. PARTS LOCATION & PARTS LIST

## 4-1. F-5081 FM Board (Stock No. 00939001 = RX-4010-XX & RX-3010-XX/Stock No. 00939004 = RX-4010-SABS & RX-3010 = SABS) (Stock No. 00920805 = RX-4010L & RX-3010L/Stock No. 00920808 = RX-4010F & RX-3010F)

Component Side




Pattern Side <Chip Parts>




Parts List

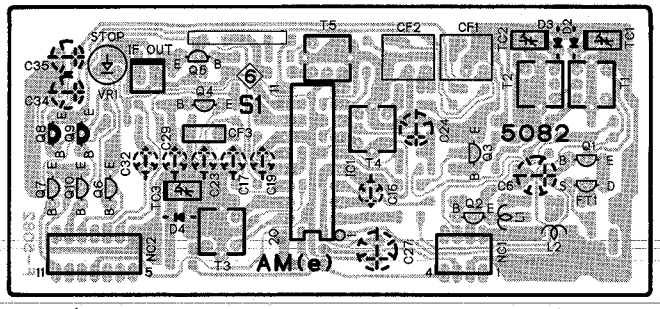
| Parts No. | Stock No. | Description |
|---|---|---|
| dZ1 | 48273000 | FM Front end Pack (RX-3010-XX/3010L/3010F/ 4010-XX/4010L/4010F) |
| | 48273200 | FM Front end Pack (RX-3010-SABS/4010-SABS) |
| •Transistor | | |
| dQ1 | 48273400 | 2SA1435 |
| dQ2 | 46367101 | 2SC2603 |
| | or 46367301 | 2SC2458 |
| dQ3 | 48171600 | DTC114YS |
| •IC | | |
| dIC1 | 46465000 | LA1140 |
| dIC2 | 48159600 | NC3S300 (RX-3010L/3010F/4010L/4010F) |
| dIC3 | 48270500 | LA3430 |
| dCF1 | 48272800 | Quartz Element CSB456F11 |
| •Diode | | |
| dD1 | 46852000 | RLS-73 (Chip) |
| dD2 | 46852000 | RLS-73 (Chip) |
| dD3 | 46852000 | RLS-73 (Chip) |
| dD4 | 46852000 | RLS-73 (Chip) |
| dD5 | 46852000 | RLS-73 (Chip) |
| dJW1~5 | 46741100 | Cross Conductor (Chip) |
| dR1 | 46745800 | 180Ω 1/8W Chip R. |
| dR2 | 46747600 | 1kΩ 1/8W Chip R. |
| dR4 | 46749200 | 4.7kΩ 1/8W Chip R. |
| dR5 | 46742800 | 10Ω 1/8W Chip R. |
| dR6 | 46746400 | 330Ω 1/8W Chip R. |
| dR7 | 46745600 | 150Ω 1/8W Chip R. |
| dR8 | 46745800 | 180Ω 1/8W Chip R. |
| dR9 | 46753200 | 220kΩ 1/8W Chip R. |
| dR10 | 46752400 | 100kΩ 1/8W Chip R. |
| dR11 | 46750800 | 22kΩ 1/8W Chip R. |
| dR12 | 46747600 | 1kΩ 1/8W Chip R. |
| dR13 | 46750200 | 12kΩ 1/8W Chip R. |
| dR14 | 46748600 | 2.7kΩ 1/8W Chip R. |
| dR15 | 46753200 | 220kΩ 1/8W Chip R. |
| dR16 | 46750800 | 22kΩ 1/8W Chip R. |
| dR17 | 46749200 | 4.7kΩ 1/8W Chip R. |
| dR18 | 46751600 | 47kΩ 1/8W Chip R. |
| dR19 | 46747600 | 1kΩ 1/8W Chip R. |
| dR20 | 46750600 | 18kΩ 1/8W Chip R. |
| dR21 | 46748400 | 2.2kΩ 1/8W Chip R. |
| dR22 | 46747600 | 1kΩ 1/8W Chip R. |
| dR23 | 46750600 | 18kΩ 1/8W Chip R. |
| dR24 | 46748800 | 3.3kΩ 1/8W Chip R. |
| dR25 | 46752400 | 100kΩ 1/8W Chip R. |

| Parts No. | Stock No. | Description |
|---|---|---|
| dR26 | 46747600 | 1kΩ 1/8W Chip R. |
| dR27 | 46750000 | 10kΩ 1/8W Chip R. |
| dC1 | 46854900 | 47000pF 50V Chip C. |
| dC2 | 46854500 | 22000pF 50V Chip C. |
| dC3 | 46854500 | 22000pF 50V Chip C. |
| dC4 | 46854900 | 47000pF 50V Chip C. |
| dC5 | 46854900 | 47000pF 50V Chip C. |
| dC6 | 46854900 | 47000pF 50V Chip C. |
| dC7 | 46849700 | 0.1μF 50V E.C. |
| dC8 | 46856900 | 680pF Chip C.V |
| dC9 | 46757100 | 33pF 50V Chip C.CH |
| dC10 | 46848300 | 4.7μF 25V E.C. |
| dC11 | 46854900 | 47000pF 50V Chip C. |
| dC12 | 46854900 | 47000pF 50V Chip C. |
| dC13 | 46854500 | 22000pF 50V Chip C. |
| dC14 | 46854500 | 22000pF 50V Chip C. |
| dC15 | 46850300 | 1μF 50V E.C. |
| dC16 | 46847600 | 10μF 16V E.C. |
| dC17 | 46847000 | 22μF 10V E.C. |
| dC18 | 46847000 | 22μF 10V E.C. |
| dC19 | 46854900 | 47000pF 50V Chip C. |
| dC20 | 46847600 | 10μF 16V E.C. |
| dC21 | 46794900 | 3300pF 50V Chip C. |
| dC22 | 46854700 | 33000pF 50V Chip C. |
| dC23 | 46847400 | 100μF 10V E.C. |
| dC24 | 46854500 | 22000pF 50V Chip C. |
| dC25 | 46854500 | 22000pF 50V Chip C. |
| dC26 | 46849900 | 0.22μF 50V E.C. |
| dC27 | 46715400 | 6.8μF 10V E.C. |
| dC28 | 46850300 | 1μF 50V E.C. |
| dC29 | 46850600 | 3.3μF 50V E.C. |
| dC30 | 46756300 | 15pF 50V Chip C.CH |
| dC31 | 46847600 | 10μF 16V E.C. |
| dC32 | 46850300 | 1μF 50V E.C. |
| dC33 | 46850300 | 1μF 50V E.C. |
| dC34 | 46854900 | 47000pF 50V Chip C. |
| dL1 | 48286100 | Inductor 22 μH |
| dL2 | 48284900 | Inductor 2.2 mH |
| dL3 | 48287300 | Inductor 220 μH |
| dT1 | 46464500 | FM IF Coil |
| dT2 | 46464600 | FM IF Coil |
| dVR1 | 46839300 | 1kΩ S.V.R., Auto Stop Level adj. |
| dVR2 | 46839700 | 22kΩ S.V.R., Noise Control Level adj. |
| dVR3 | 46839300 | 1kΩ S.V.R., Separation adj. |
| | or 46839600 | 10kΩ S.V.R., Separation adj. (RX-3010/4010) |
| dVR4 | 46839800 | 47kΩ S.V.R., Pilot Canceller adj. |
| | or 46839900 | 100kΩ S.V.R., Pilot Canceller adj. (RX-3010/4010) |

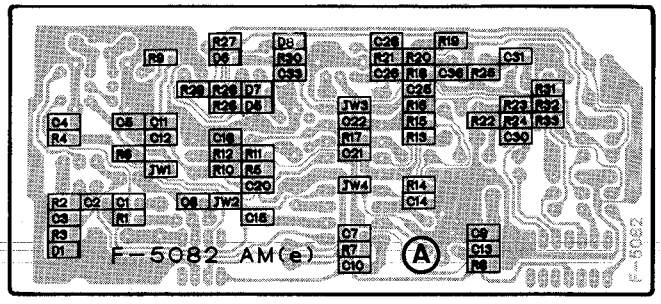
## 4-2. F-5082 AM Board **This board is in use the RX-4010, 4010F, 3010, 3010F.*

(Stock No. 00948001 = RX-4010 & 3010/Stock No. 00948008 = RX-4010F & 3010F)

**Component Side**




**Pattern Side <Chip Parts>**




**Parts List**

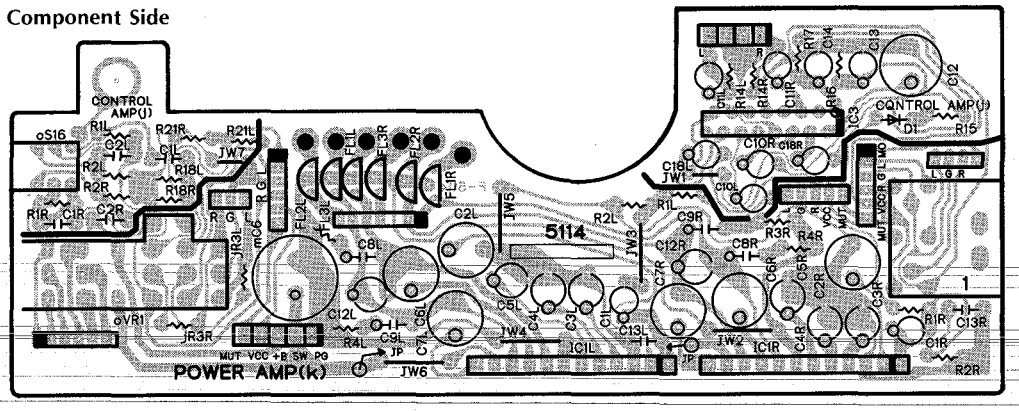
| Parts No. | Stock No. | Description |
|---|---|---|
| •Transistor | | |
| eQ1 | 03068501 | 2SC1844 |
| eQ2 | 46604301 | 2SC3327 |
| eQ3 | 46367301 | 2SC2458 |
| eQ4 | 46367301 | 2SC2458 |
| eQ6 | 46367301 | 2SC2458 |
| eQ7 | 46719900 | DTC124ES |
| •FET | | |
| eFT1 | 48198701 | 2SK519-F |
| | or 48198702 | 2SK519-H |
| | or 48198703 | 2SK519-J |
| •IC | | |
| eIC1 | 46669000 | LA1135 |
| •Diode | | |
| eD1 | 46852000 | RLS-73 (Chip) |
| eD2 | 46254600 | Variable Capacitance Diode 1SV100 |
| | or 46835100 | Variable Capacitance Diode 1SV149 |
| eD3 | 46254600 | Variable Capacitance Diode 1SV100 |
| | or 46835100 | Variable Capacitance Diode 1SV149 |
| eD4 | 46254600 | Variable Capacitance Diode 1SV100 |
| | or 46835100 | Variable Capacitance Diode 1SV149 |
| eJW1 | 46741100 | Cross Conductor (Chip) |
| eJW2 | 46741100 | Cross Conductor (Chip) |
| eJW3 | 46741100 | Cross Conductor (Chip) |
| eJW4 | 46741100 | Cross Conductor (Chip) |
| eJW5 | 46741100 | Cross Conductor (Chip) |
| eJW6 | 46741100 | Cross Conductor (Chip) |
| eR1 | 46745000 | 82Ω 1/8W Chip R. |
| eR2 | 46752400 | 100kΩ 1/8W Chip R. |
| eR3 | 46745200 | 100Ω 1/8W Chip R. |
| eR4 | 46744800 | 68Ω 1/8W Chip R. |
| eR5 | 46743600 | 22Ω 1/8W Chip R. |
| eR6 | 46752400 | 100kΩ 1/8W Chip R. |
| eR7 | 46748600 | 2.7kΩ 1/8W Chip R. |
| eR8 | 46750800 | 22kΩ 1/8W Chip R. |
| eR9 | 46747800 | 1.2kΩ 1/8W Chip R. |
| eR10 | 46750000 | 10kΩ 1/8W Chip R. |
| eR11 | 46749800 | 8.2kΩ 1/8W Chip R. |
| eR12 | 46746000 | 220Ω 1/8W Chip R. |
| eR13 | 46745000 | 82Ω 1/8W Chip R. |
| eR14 | 46750000 | 10kΩ 1/8W Chip R. |
| eR15 | 46750000 | 10kΩ 1/8W Chip R. |
| eR16 | 46748600 | 2.7kΩ 1/8W Chip R. |
| eR17 | 46744400 | 47Ω 1/8W Chip R. |
| eR21 | 46745200 | 100Ω 1/8W Chip R. |

| Parts No. | Stock No. | Description |
|---|---|---|
| eR22 | 46752400 | 100kΩ 1/8W Chip R. |
| eR23 | 46750000 | 10kΩ 1/8W Chip R. |
| eR24 | 46749200 | 4.7kΩ 1/8W Chip R. |
| eR30 | 46748400 | 2.2kΩ 1/8W Chip R. |
| eR32 | 46750000 | 10kΩ 1/8W Chip R. |
| eR33 | 46749200 | 4.7kΩ 1/8W Chip R. |
| eC1 | 46854500 | 22000pF 50V Chip C. |
| eC2 | 46854500 | 22000pF 50V Chip C. |
| eC3 | 46854900 | 47000pF 50V Chip C. |
| eC4 | 46854900 | 47000pF 50V Chip C. |
| eC5 | 46854900 | 47000pF 50V Chip C. |
| eC6 | 46847400 | 100μF 10V E.C. |
| eC7 | 46854900 | 47000pF 50V Chip C. |
| eC8 | 46854500 | 22000pF 50V Chip C. |
| eC9 | 46772600 | 15pF 50V Chip C.UJ |
| eC10 | 46854500 | 22000pF 50V Chip C. |
| eC11 | 46758300 | 100pF 50V Chip C.CH |
| eC12 | 46854500 | 22000pF 50V Chip C. |
| eC13 | 46856600 | 510pF Chip C.V |
| eC14 | 46854900 | 47000pF 50V Chip C. |
| eC15 | 46854500 | 22000pF 50V Chip C. |
| eC16 | 46850300 | 1μF 50V E.C. |
| eC17 | 46848300 | 4.7μF 25V E.C. |
| eC18 | 46854900 | 47000pF 50V Chip C. |
| eC19 | 46849000 | 3.3μF 35V E.C. |
| eC20 | 46854500 | 22000pF 50V Chip C. |
| eC21 | 46795100 | 4700pF 50V Chip C. |
| eC22 | 46795500 | 10000pF 50V Chip C. |
| eC23 | 46849000 | 3.3μF 35V E.C. |
| eC24 | 46847200 | 47μF 10V E.C. |
| eC25 | 46854700 | 33000pF 50V Chip C. |
| eC27 | 46847400 | 100μF 10V E.C. |
| eC28 | 46854500 | 22000pF 50V Chip C. |
| eC29 | 46850300 | 1μF 50V E.C. |
| eC30 | 46795500 | 10000pF 50V Chip C. |
| eC32 | 46847600 | 10μF 16V E.C. |
| eC33 | 46854500 | 22000pF 50V Chip C. |
| eTC1 | 46613200 | Trimmer Capacitor 20pF |
| eTC2 | 46613200 | Trimmer Capacitor 20pF |
| eTC3 | 46613300 | Trimmer Capacitor 30pF |
| eCF2 | 46724500 | Ceramic Filter SFP450H |
| eCF3 | 46578100 | Ceramic Filter BFU-450C10N |
| eL1 | 48286900 | Inductor 10 mH |
| eL2 | 46838300 | Inductor 3.3 mH |
| eT1 | 48264700 | AM RF Coil |
| eT2 | 46835400 | MW RF Coil (2) |
| eT3 | 46835500 | MW OSC Coil |
| eT4 | 46724300 | AM IF Coil |
| eT5 | 46836000 | AM IF Coil (2) |
| eVR1 | 46839600 | 10kΩ S.V.R., Auto Stop Level adj. |

## 4-3. F-5114 Power Amp. Board *This board is not in use the RX-3010.* (Stock No. 00920501 = RX-4010)

(Stock No. 00920505 = RX-4010L/Stock No. 00920508 = RX-4010F/Stock No. 00921105 = RX-3010L/Stock No. 00921108 = RX-3010F)

Component Side




**Parts List**

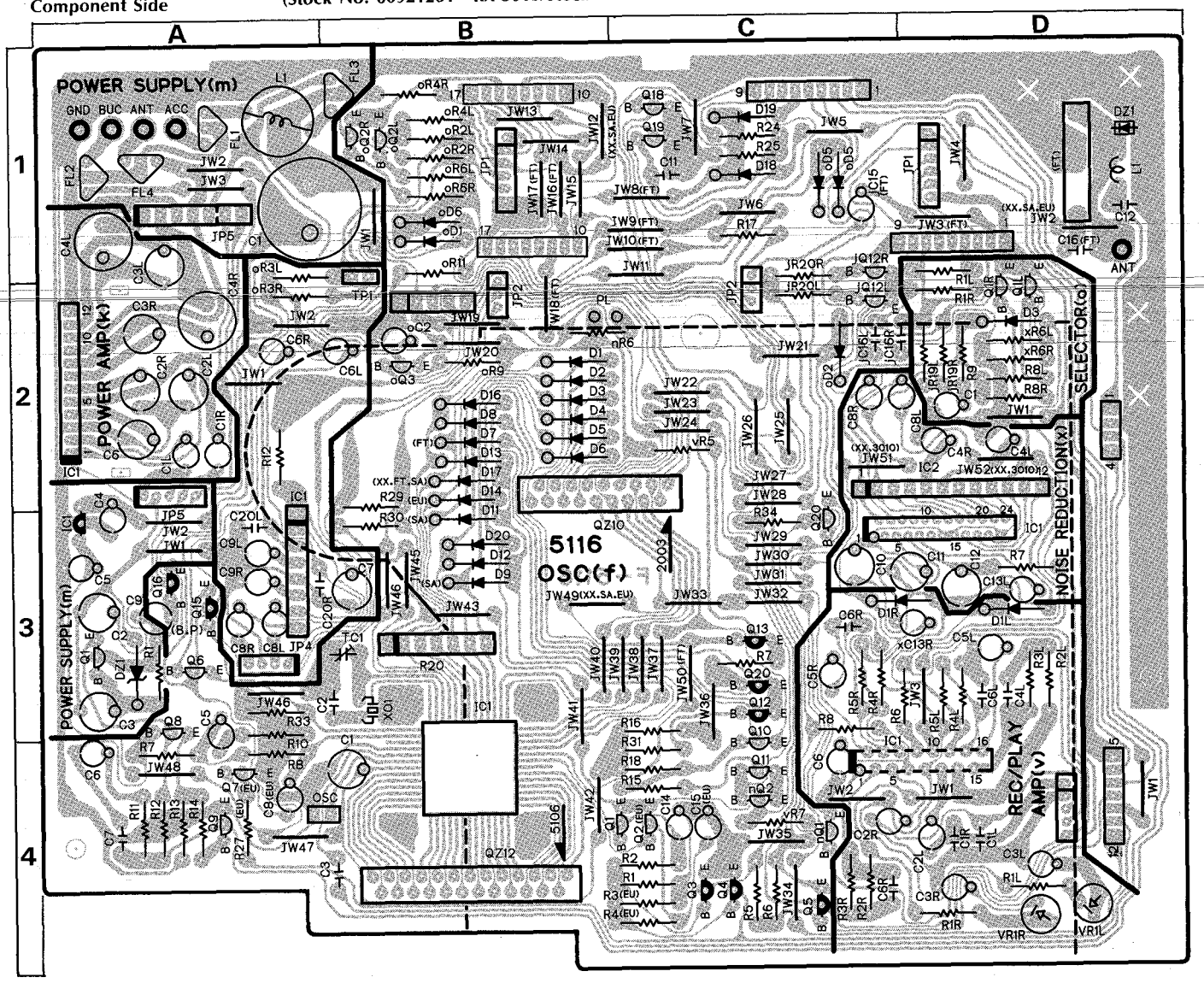
| Parts No. | Stock No. | Description |
|---|---|---|
| •IC | | |
| jIC3 | 48259300 | TA7414P (RX-4010/4010L/4010F) |
| •Diode | | |
| jD1 | 48225600 | 1SS133-T91 (RX-4010/4010L/4010F) |
| jR1 | 48257000 | 560kΩ 1/6W C.R. |
| jR2 | 48252200 | 5.6kΩ 1/6W C.R. |
| jR3 | 48250400 | 1kΩ 1/6W C.R. |
| jR14 | 48255200 | 100kΩ 1/6W C.R. (RX-4010/4010L/4010F) |
| jR15 | 48254000 | 33kΩ 1/6W C.R. (RX-4010/4010L/4010F) |
| jR16 | 48255200 | 100kΩ 1/6W C.R. (RX-4010/4010L/4010F) |
| jR17 | 48248000 | 100Ω 1/6W C.R. (RX-4010/4010L/4010F) |
| jR18 | 48246400 | 22Ω 1/6W C.R. (RX-3010F/4010F) |
| jR21 | 48250400 | 1kΩ 1/6W C.R. (RX-3010F/4010F) |
| jC1 | 46277200 | 1500pF 50V F.C. (RX-3010L/3010F) |
| | 48300200 | 2200pF 50V F.C. (RX-4010L/4010F) |
| jC2 | 46283500 | 0.033μF 50V F.C. |
| jC10 | 48155800 | 1μF 50V E.C. (RX-4010/4010L/4010F) |
| jC11 | 48154500 | 2.2μF 35V E.C. (RX-4010/4010L/4010F) |
| jC12 | 48306800 | 470μF 10V E.C. (RX-4010/4010L/4010F) |
| jC13 | 48153100 | 4.7μF 16V E.C. (RX-4010/4010L/4010F) |
| jC14 | 48153300 | 10μF 16V E.C. (RX-4010/4010L/4010F) |

| Parts No. | Stock No. | Description |
|---|---|---|
| jC18 | 48155800 | 1μF 50V E.C. (RX-4010/4010L/4010F) |
| •IC | | |
| kIC1 | 46837100 | M51104L |
| kR1 | 48252200 | 5.6kΩ 1/6W C.R. (RX-3010L/3010F) |
| | 48254200 | 39kΩ 1/6W C.R. (RX-4010/4010L/4010F) |
| kR2 | 48252000 | 4.7kΩ 1/6W C.R. |
| kC1 | 46931500 | 3.3μF 50V E.C. |
| kC2 | 08411600 | 100μF 16V E.C. (RX-3010L/3010F) |
| kC3 | 46927700 | 47μF 6.3V E.C. |
| kC4 | 46927700 | 47μF 6.3V E.C. |
| kC5 | 46928500 | 10μF 16V E.C. |
| kC6 | 46552900 | 220μF 16V E.C. (RX-3010L/3010F) |
| kC7 | 46552900 | 220μF 16V E.C. (RX-3010L/3010F) |
| kC8 | 48236400 | 0.15μF 25V E.C. |
| kC9 | 48236400 | 0.15μF 25V E.C. |
| kC12 | 48236400 | 0.15μF 25V E.C. |
| kFL1 | 46335500 | Straight Through Capacitor |
| kFL2 | 46335500 | Straight Through Capacitor |
| kFL3 | 46335500 | Straight Through Capacitor (RX-4010/4010L/4010F) |
| mC6 | 46316800 | 1000μF 16V E.C. |
| oS16 | 46866600 | Push SW., LOUDNESS |
| oVR1 | 48274300 | V.R., VOLUME/BALANCE/FADER |
| qZ9 | 46852400 | DIN Jack, LINE IN/OUT |

## 4-4. F-5116 Main Board

(Stock No. 00920401 = RX-4010/Stock No. 00920405 = RX-4010L/Stock No. 00920408 = RX-4010F)
(Stock No. 00921201 = RX-3010/Stock No. 00921205 = RX-3010L/Stock No. 00921208 = RX-3010F)

Component Side




### Parts List

| Parts No. | Stock No. | Description |
|---|---|---|
| •Transistor | | |
| fQ1 | 46719900 | DTC124ES |
| fQ2 | 46719900 | DTC124ES (RX-3010L/4010L) |
| fQ3 | 46367001 | 2SA1115 |
| fQ4 | 46367001 | 2SA1115 (RX-3010L/4010L) |
| fQ5 | 46367001 | 2SA1115 |
| fQ6 | 46719900 | DTC124ES |
| fQ7 | 46604301 | 2SC3327 (RX-3010L/4010L) |
| fQ8 | 46604301 | 2SC3327 |
| fQ9 | 46604301 | 2SC3327 |
| fQ10 | 46367001 | 2SA1115 |
| fQ11 | 46719900 | DTC124ES |
| fQ12 | 46367001 | 2SA1115 (RX-3010F/4010F) |
| fQ13 | 46719800 | DTA124ES |
| fQ14 | 46367001 | 2SA1115 (RX-3010F/4010F) |
| fQ15 | 46719800 | DTA124ES |
| fQ16 | 46719800 | DTA124ES |
| fQ18 | 46719900 | DTC124ES |
| fQ19 | 46367101 | 2SC2603 |
| fQ20 | 46719900 | DTC124ES |
| •IC | | |
| fIC1 | 48270600 | μPD1708G-213-03 |
| fXO1 | 46253600 | Quartz Element 4.5MHz |
| | or 46253601 | Quartz Element 4.5MHz |
| •Diode | | |
| fD1 | 03117600 | 1S2473T77 |
| fD2 | 03117600 | 1S2473T77 |
| fD3 | 03117600 | 1S2473T77 |
| fD4 | 03117600 | 1S2473T77 |
| fD5 | 03117600 | 1S2473T77 |
| fD6 | 03117600 | 1S2473T77 |
| fD7 | 03117600 | 1S2473T77 (RX-3010F/4010F) |
| fD8 | 03117600 | 1S2473T77 |
| fD9 | 03117600 | 1S2473T77 (RX-3010-SABS/4010-SABS) |
| fD11 | 03117600 | 1S2473T77 (RX-3010-SABS/4010-SABS) |
| fD12 | 03117600 | 1S2473T77 (RX-3010-XX/4010-XX) |
| fD13 | 03117600 | 1S2473T77 |
| fD14 | 03117600 | 1S2473T77 (RX-3010L/4010L) |
| fD16 | 03117600 | 1S2473T77 |
| fD17 | 03117600 | 1S2473T77 (RX-3010/3010F/4010/4010F) |

RX-4010/4010L/4010F
RX-3010/3010L/3010F

Parts List <F-5116>

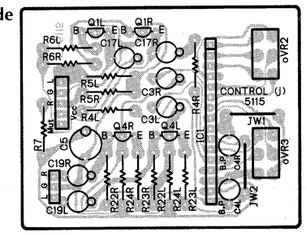
| Parts No. | Stock No. | Description |
|---|---|---|
| fD18 | 03117600 | 1S2473T77 |
| fD19 | 03117600 | 1S2473T77 |
| fD20 | 03117600 | 1S2473T77 |
| fDZ1 | 48234800 | Surge/Absorb DSP-301NL |
| fR20 | 46346400 | 47kΩX6 1/8W A.R. |
| fC1 | 48152300 | 100μF 6.3V E.C. |
| fC5 | 48156000 | 2.2μF 50V E.C. |
| fC6 | 48165800 | 3.3μF 50V E.B. |
| fC8 | 48155500 | 0.33μF 50V E.C. (RX-3010L/4010L) |
| fC9 | 48165700 | 2.2μF 50V E.B. |
| fC14 | 48153300 | 10μF 16V E.C. |
| fC15 | 48153300 | 10μF 16V E.C. (RX-3010L/4010L) |
| fC16 | 48298000 | 270pF 50V C.C. |
| fTC1 | 46444600 | Trimmer Capacitor 30pF |
| fL1 | 48148700 | Inductor 22 μH |
| •Transistor | | |
| jQ2 | 46367101 | 2SC2603 |
| | or 46367301 | 2SC2458 (RX-4010/4010L/4010F) |
| •IC | | |
| jIC1 | 48313300 | BA3112 |
| jC6 | 48156000 | 2.2μF 50V E.C. |
| jC7 | 48152900 | 47μF 10V E.C. |
| jC8 | 48156000 | 2.2μF 50V E.C. |
| jC9 | 48151900 | 22μF 6.3V E.C. |
| jC15 | 46929200 | 4.7μF 25V E.C. (RX-3010F) |
| | 48153100 | 4.7μF 16V E.C. (RX-4010F) |
| jC16 | 48294600 | 0.012μF 25V F.C. (RX-3010/3010L/3010F) |
| jC20 | 48300200 | 2200pF 50V F.C. |
| •IC | | |
| kIC1 | 48270200 | LA4445 (RX-3010) |
| kC2 | 48151600 | 220μF 4V E.C. (RX-3010) |
| kC4 | 46316800 | 1000μF 16V E.C. (RX-3010) |
| •Transistor | | |
| mQ1 | 46859201 | 2SD1225M |
| •IC | | |
| mIC1 | 48065800 | M5278L05 |
| •Zener Diode | | |
| mDZ1 | 46113300 | 05Z10-Y |
| mC1 | 46316800 | 1000μF 16V E.C. (RX-3010L/3010F/4010/4010L/4010F) |
| | 48219500 | 2200μF 16V E.C. (RX-3010) |
| mC2 | 46929100 | 100μF 16V E.C. |
| mC3 | 46929100 | 100μF 16V E.C. |
| mC4 | 46928900 | 47μF 16V E.C. |
| mC5 | 46928500 | 10μF 16V E.C. |
| mFL1 | 48196900 | Filter |
| mFL2 | 46271100 | Filter |
| | or 48302700 | E.M.I. Filter Y223NB |
| mFL3 | 46271100 | Filter |
| | or 48302700 | E.M.I. Filter Y223NB |
| mFL4 | 46271100 | Filter |
| | or 48302700 | E.M.I. Filter Y223NB |
| mL1 | 46273800 | Filter Coil 50μH |
| •Transistor | | |
| nQ1 | 46367101 | 2SC2603 |
| nQ2 | 46719900 | DTC124ES |

| Parts No. | Stock No. | Description |
|---|---|---|
| nPL5 | 48279400 | 14V 50mA Pilot Lamp, cassette door |
| •Transistor | | |
| oQ1 | 46367101 | 2SC2603 |
| | or 46367301 | 2SC2458 |
| oQ2 | 46367101 | 2SC2603 |
| | or 46367301 | 2SC2458 |
| oQ3 | 46719900 | DTC124ES |
| •Diode | | |
| oD1 | 03117600 | 1S2473T77 |
| oD2 | 03117600 | 1S2473T77 |
| oD3 | 03117600 | 1S2473T77 |
| oD4 | 03117600 | 1S2473T77 |
| oD5 | 03117600 | 1S2473T77 |
| oD6 | 03117600 | 1S2473T77 |
| oC1 | 48153800 | 3.3μF 25V E.C. |
| oC2 | 48155700 | 0.68μF 50V E.C. |
| •IC | | |
| vIC1 | 46837200 | BA3406L |
| •Diode | | |
| vD1 | 03117600 | 1S2473T77 |
| vC2 | 48153100 | 4.7μF 16V E.C. |
| vC3 | 48152100 | 47μF 6.3V E.C. |
| vC5 | 48153100 | 4.7μF 16V E.C. |
| vC6 | 48153000 | 68μF 10V E.C. |
| vVR1 | 46839000 | 100Ω S.V.R., P.B. Level adj. |
| •IC | | |
| xIC1 | 48263900 | BA1104LS (RX-4010/4010L/4010F) |
| xC4 | 48155200 | 0.1μF 50V E.C. (RX-4010/4010L/4010F) |
| xC8 | 48153100 | 4.7μF 16V E.C. (RX-4010/4010L/4010F) |
| xC10 | 48153000 | 68μF 10V E.C. (RX-4010/4010L/4010F) |
| xC11 | 48153000 | 68μF 10V E.C. (RX-4010/4010L/4010F) |
| xC12 | 48153000 | 68μF 10V E.C. (RX-4010/4010L/4010F) |
| xC13 | 48156000 | 2.2μF 50V E.C. (RX-4010/4010L/4010F) |
| xIC2 | 48314200 | CR Array (DOLBY NR) (RX-4010/4010L/4010F) |

## 4-5. F-5115 Tone Control Board

(Stock No. 00920601 = RX-4010/Stock No. 00921301 = RX-3010)
(Stock No. 00920605 = RX-4010L/Stock No. 00921305 = RX-3010L)
(Stock No. 00920608 = RX-4010F/Stock No. 00921308 = RX-3010F)

Component Side

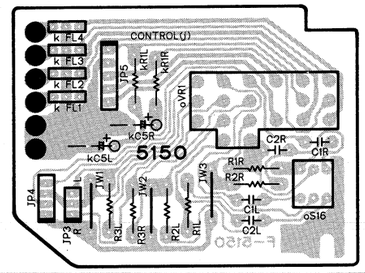



Parts List

| Parts No. | Stock No. | Description |
|---|---|---|
| •Transistor | | |
| jQ1 | 46367101 | 2SC2603 |
| | or 46367301 | 2SC2458 |
| jQ4 | 46367301 | 2SC2458 |
| •IC | | |
| jIC1 | 48270100 | KC-819 |
| jC3 | 48153100 | 4.7μF 16V E.C. |
| jC4 | 48153100 | 4.7μF 16V E.C. |
| jC5 | 48153700 | 47μF 16V E.C. |
| jC17 | 48154500 | 2.2μF 35V E.C. |
| jC19 | 48155800 | 1μF 50V E.C. |
| oVR2 | 48274100 | 50kΩ (B) V.R., BASS |
| oVR3 | 48274100 | 50kΩ (B) V.R., TREBLE |

## 4-6. F-5150 VOLUME & LOUDNESS Board

Component Side **This board is in use the RX-3010.*

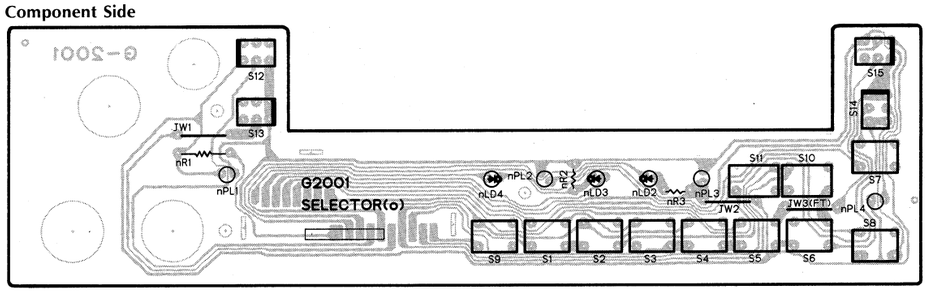



Parts List

| Parts No. | Stock No. | Description |
|---|---|---|
| jC2 | 46278700 | 0.033μF 50V F.C. |
| kC5 | 48236300 | 0.1μF 25V E.C. |
| kFL1 | 46335500 | Straight Through Capacitor |
| | or 48302300 | E.M.I. Filter Y223NS |
| kFL2 | 46335500 | Straight Through Capacitor |
| | or 48302300 | E.M.I. Filter Y223NS |
| kFL3 | 46335500 | Straight Through Capacitor |
| | or 48302300 | E.M.I. Filter Y223NS |
| kFL4 | 46335500 | Straight Through Capacitor |
| | or 48302300 | E.M.I. Filter Y223NS |
| oS16 | 46866600 | Push SW., LOUDNESS |
| oVR1 | 46837800 | V.R. Ass'y, VOLUME/FADER/BALANCE |

## 4-7. G-2001 Control Switch Board

Component Side




Parts List

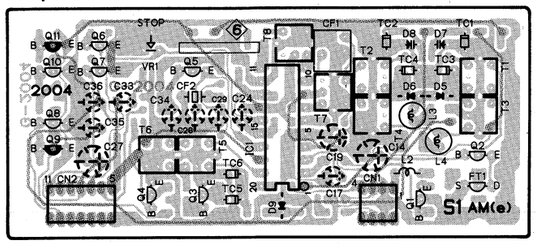
| Parts No. | Stock No. | Description |
|---|---|---|
| •LED | | |
| nLD2 | 46470200 | SEL2210S, METAL |
| nLD3 | 48189200 | GL-3EG7, PROGRAM ► |
| nLD4 | 48189200 | GL-3EG7, PROGRAM ◄ |
| nPL1 | 46941200 | 14V 0.05A Pilot Lamp, Illumination of LCD |
| nPL2 | 46941200 | 14V 0.05A Pilot Lamp, Illumination Panel |
| nPL3 | 46941200 | 14V 0.05A Pilot Lamp, Illumination Panel |
| nPL4 | 46941200 | 14V 0.05A Pilot Lamp, TUNE |
| oS1 | 46549500 | Push SW., Preset 1 |
| | or 46549502 | Push SW., Preset 1 |
| oS2 | 46549500 | Push SW., Preset 2 |
| | or 46549502 | Push SW., Preset 2 |
| oS3 | 46549500 | Push SW., Preset 3 |
| | or 46549502 | Push SW., Preset 3 |

| Parts No. | Stock No. | Description |
|---|---|---|
| oS4 | 46549500 | Push SW., Preset 4 |
| | or 46549502 | Push SW., Preset 4 |
| oS5 | 46549500 | Push SW., Preset 5 |
| | or 46549502 | Push SW., Preset 5 |
| oS6 | 46549500 | Push SW., Preset 6 |
| | or 46549502 | Push SW., Preset 6 |
| oS7 | 46549500 | Push SW., UP |
| | or 46549502 | Push SW., UP |
| oS8 | 46549500 | Push SW., DOWN |
| | or 46549502 | Push SW., DOWN |
| oS9 | 46549500 | Push SW., BAND |
| | or 46549502 | Push SW., BAND |
| oS10 | 48240600 | Push SW., MEMORY |
| oS11 | 48240600 | Push SW., DISPLAY |
| oS12 | 46500000 | Push SW., NF or DOLBY NR |
| oS13 | 46500000 | Push SW., LOCAL |
| oS14 | 46500000 | Push SW., MANUAL |
| oS15 | 46500000 | Push SW., MONO |

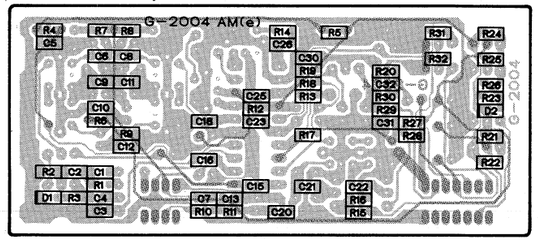
RX-4010/4010L/4010F
RX-3010/3010L/3010F

## 4-8. G-2004 MW & LW Board **This board is in use the RX-4010L and RX-3010L.* (Stock No. 00924005)

**Component Side**




**Pattern Side <Chip Parts>**




**Parts List**

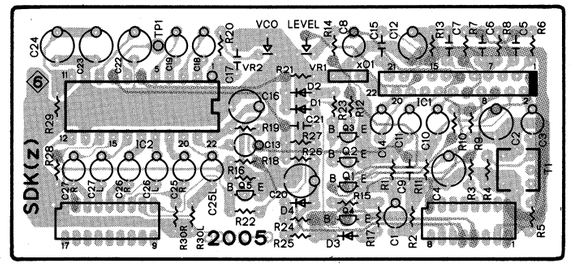
| Parts No. | Stock No. | Description |
|---|---|---|
| •Transistor | | |
| eQ1 | 46604301 | 2SC3327 |
| eQ2 | 03068501 | 2SC1844 |
| eQ3 | 46367301 | 2SC2458 |
| eQ4 | 46367301 | 2SC2458 |
| eQ5 | 46367301 | 2SC2458 |
| eQ6 | 46367101 | 2SC2603 |
| | or 46367301 | 2SC2458 |
| eQ7 | 46719900 | DTC124ES |
| eQ8 | 46719900 | DTC124ES |
| eQ9 | 46367001 | 2SA1115 |
| eQ10 | 46719900 | DTC124ES |
| eQ11 | 46367001 | 2SA1115 |
| •FET | | |
| eFT1 | 48198701 | 2SK519-F |
| | or 48198702 | 2SK519-H |
| | or 48198703 | 2SK519-J |
| •IC | | |
| eIC1 | 46669000 | LA1135 |
| •Diode | | |
| eD1 | 46852000 | RLS-73 (Chip) |
| eD2 | 46852000 | RLS-73 (Chip) |
| eD5 | 46728000 | 1SS216 |
| eD6 | 46728000 | 1SS216 |
| eD7 | 46254600 | Variable Capacitance Diode 1SV100 |
| | or 46835100 | Variable Capacitance Diode 1SV149 |
| eD8 | 46254600 | Variable Capacitance Diode 1SV100 |
| | or 46835100 | Variable Capacitance Diode 1SV149 |
| eD9 | 46254600 | Variable Capacitance Diode 1SV100 |
| | or 46835100 | Variable Capacitance Diode 1SV149 |
| eR1 | 46745200 | 100Ω 1/8W Chip R. |
| eR2 | 46752400 | 100kΩ 1/8W Chip R. |
| eR3 | 46745200 | 100Ω 1/8W Chip R. |
| eR4 | 46744400 | 47Ω 1/8W Chip R. |
| eR5 | 46743600 | 22Ω 1/8W Chip R. |
| eR6 | 46746200 | 270Ω 1/8W Chip R. |
| eR7 | 46753200 | 220kΩ 1/8W Chip R. |
| eR8 | 46753200 | 220kΩ 1/8W Chip R. |
| eR9 | 46746400 | 330Ω 1/8W Chip R. |
| eR10 | 46747600 | 1kΩ 1/8W Chip R. |
| eR11 | 46750800 | 22kΩ 1/8W Chip R. |
| eR12 | 46744400 | 47Ω 1/8W Chip R. |
| eR13 | 46744400 | 47Ω 1/8W Chip R. |
| eR14 | 46745200 | 100Ω 1/8W Chip R. |
| eR15 | 46748800 | 3.3kΩ 1/8W Chip R. |
| eR16 | 46751600 | 47kΩ 1/8W Chip R. |
| eR17 | 46750000 | 10kΩ 1/8W Chip R. |
| eR18 | 46750000 | 10kΩ 1/8W Chip R. |
| eR19 | 46748600 | 2.7kΩ 1/8W Chip R. |
| eR20 | 46749200 | 4.7kΩ 1/8W Chip R. |
| eR21 | 46749200 | 4.7kΩ 1/8W Chip R. |
| eR22 | 46750000 | 10kΩ 1/8W Chip R. |
| eR23 | 46750000 | 10kΩ 1/8W Chip R. |
| eR24 | 46750000 | 10kΩ 1/8W Chip R. |
| eR25 | 46749200 | 4.7kΩ 1/8W Chip R. |
| eR26 | 46751600 | 47kΩ 1/8W Chip R. |
| eR27 | 46748800 | 3.3kΩ 1/8W Chip R. |
| eR28 | 46751600 | 47kΩ 1/8W Chip R. |
| eR29 | 46752400 | 100kΩ 1/8W Chip R. |
| eR30 | 46750000 | 10kΩ 1/8W Chip R. |
| eR31 | 46750000 | 10kΩ 1/8W Chip R. |
| eR32 | 46750200 | 12kΩ 1/8W Chip R. |
| eC1 | 46854500 | 0.022μF 50V Chip C. |
| eC2 | 46854500 | 0.022μF 50V Chip C. |
| eC3 | 46854500 | 0.022μF 50V Chip C. |
| eC4 | 46854900 | 0.047μF 50V Chip C. |
| eC5 | 46854900 | 0.047μF 50V Chip C. |
| eC6 | 46854500 | 0.022μF 50V Chip C. |
| eC7 | 46854500 | 0.022μF 50V Chip C. |
| eC8 | 46854500 | 0.022μF 50V Chip C. |
| eC9 | 46773600 | 39pF 50V Chip C. |
| eC10 | 46854900 | 0.047μF 50V Chip C. |
| eC11 | 46773800 | 47pF 50V Chip C. |
| eC12 | 46854900 | 0.047μF 50V Chip C. |
| eC13 | 46854500 | 0.022μF 50V Chip C. |
| eC14 | 46847400 | 100μF 10V E.C. |
| eC15 | 46795500 | 0.01μF 50V Chip C. |
| eC16 | 46854500 | 0.022μF 50V Chip C. |
| eC17 | 46850300 | 1μF 50V E.C. |
| eC18 | 46854500 | 0.022μF 50V Chip C. |
| eC19 | 46716500 | 22μF 16V E.C. |
| eC20 | 46856600 | 510pF Chip C. |
| eC21 | 46855900 | 270pF 50V Chip C. |
| eC22 | 46854500 | 0.022μF 50V Chip C. |
| eC23 | 46854900 | 0.047μF 50V Chip C. |
| eC24 | 46849000 | 3.3μF 35V E.C. |
| eC25 | 46795500 | 0.01μF 50V Chip C. |
| eC26 | 46854500 | 0.022μF 50V Chip C. |
| eC27 | 46847400 | 100μF 10V E.C. |
| eC28 | 46848300 | 4.7μF 25V E.C. |
| eC29 | 46849000 | 3.3μF 35V E.C. |
| eC30 | 46854700 | 0.033μF 50V Chip C. |
| eC31 | 46854900 | 0.047μF 50V Chip C. |
| eC32 | 46795500 | 0.01μF 50V Chip C. |
| eC33 | 46849700 | 0.1μF 50V E.C. |
| eC34 | 46850300 | 1μF 50V E.C. |
| eC35 | 46848200 | 100μF 16V E.C. |
| eC36 | 46848200 | 100μF 16V E.C. |
| eTC1 | 46613200 | Trimmer Capacitor 20pF |
| eTC2 | 46613200 | Trimmer Capacitor 20pF |
| eTC3 | 46613300 | Trimmer Capacitor 30pF |
| eTC4 | 46613300 | Trimmer Capacitor 30pF |
| eTC5 | 46613300 | Trimmer Capacitor 30pF |
| eTC6 | 46613300 | Trimmer Capacitor 30pF |
| eCF1 | 46724500 | Ceramic Filter SFP450H |
| | or 46724501 | Ceramic Filter KBF450P-6AS |

**Parts List <G-2004>**

| Parts No. | Stock No. | Description |
|---|---|---|
| eCF2 | 46578100 | Ceramic Filter BFU-450C10N |
| eL2 | 48286900 | Inductor 10mH |
| eL3 | 46166800 | Inductor 4.7μH |
| eL4 | 46167600 | Inductor 100μH |
| eT1 | 46835300 | MW RF Coil (1) |
| eT2 | 46835400 | MW RF Coil (2) |
| eT3 | 46835600 | LW RF Coil (1) |
| eT4 | 46835700 | LW RF Coil (2) |
| eT5 | 46835500 | MW OSC Coil |
| eT6 | 46835800 | LW OSC Coil |
| eT7 | 46724300 | AM IF Coil |
| eT8 | 46836000 | AM IF Coil (2) |
| eVR1 | 46839600 | 10kΩ S.V.R., Auto Stop Level adj. |

## 4-9. G-2005 Traffic Station Board **This board is in use the RX-4010F and RX-3010F.* (Stock No. 00924108)

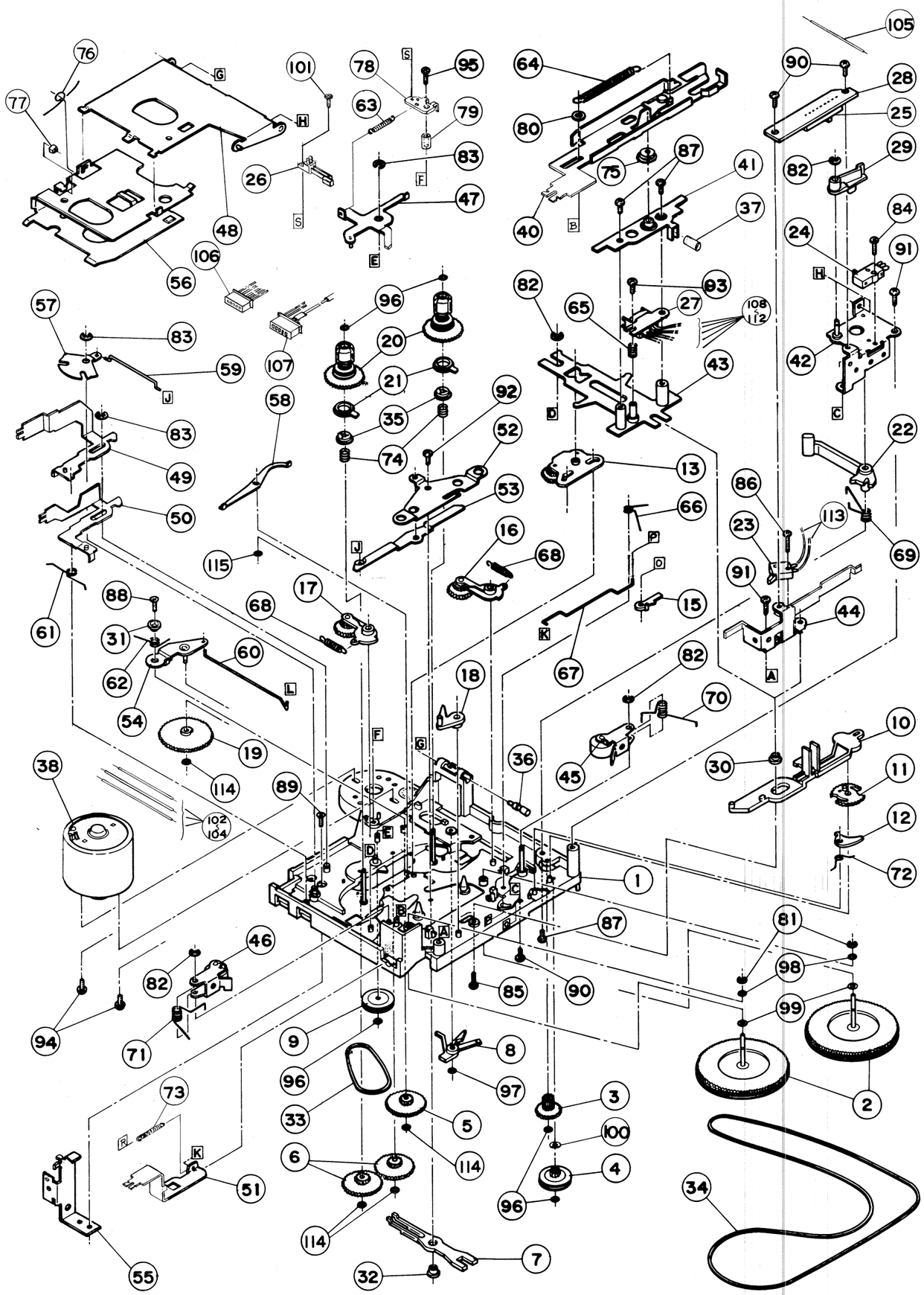
**Component Side**




**Parts List**

| Parts No. | Stock No. | Description |
|---|---|---|
| •Transistor | | |
| zQ1 | 46367101 | 2SC2603 |
| | or 46367301 | 2SC2458 |
| zQ2 | 46367101 | 2SC2603 |
| | or 46367301 | 2SC2458 |
| zQ3 | 46719900 | DTC124ES |
| zQ4 | 46719900 | DTC124ES |
| zQ5 | 46719900 | DTC124ES |
| •IC | | |
| zIC1 | 48306200 | LA2220 |
| zIC2 | 46836500 | LA2211 |
| zCF1 | 48272800 | Quartz Element CSB456F11 |
| •Diode | | |
| zD1 | 48225600 | 1SS133-T91 |
| zD2 | 48225600 | 1SS133-T91 |
| zD3 | 48225600 | 1SS133-T91 |
| zD4 | 48225600 | 1SS133-T91 |
| zR6 | 48344800 | 1.8kΩ 1/6W C.R. |
| zR7 | 48344600 | 160Ω 1/6W C.R. |
| zR8 | 48345000 | 4.7kΩ 1/6W C.R. |
| zC1 | 46928500 | 10μF 16V E.C. |
| zC2 | 46928400 | 100μF 10V E.C. |
| zC3 | 46928500 | 10μF 16V E.C. |
| zC4 | 46928400 | 100μF 10V E.C. |
| zC5 | 46692800 | 1000pF 50V F.C. |
| zC6 | 46692800 | 1000pF 50V F.C. |
| zC7 | 46693600 | 2200pF 50V F.C. |
| zC8 | 46931000 | 0.47μF 50V E.C. |
| zC9 | 48330600 | 0.47μF 50V F.C. |
| zC10 | 46931000 | 0.47μF 50V E.C. |
| zC11 | 46930900 | 0.33μF 50V E.C. |
| zC12 | 46928000 | 22μF 10V E.C. |
| zC13 | 46928500 | 10μF 16V E.C. |
| zC14 | 46928500 | 10μF 16V E.C. |
| zC15 | 48331000 | 0.068μF 50V F.C. |
| zC16 | 46928400 | 100μF 10V E.C. |
| zC17 | 46286100 | 0.22μF 63V F.C. |
| zC18 | 46931200 | 1μF 50V E.C. |
| zC19 | 46931200 | 1μF 50V E.C. |
| zC20 | 46928200 | 47μF 10V E.C. |
| zC22 | 46928200 | 47μF 10V E.C. |
| zC23 | 46928400 | 100μF 10V E.C. |
| zC24 | 46928400 | 100μF 10V E.C. |
| zC25 | 46929200 | 4.7μF 25V E.C. |
| zC26 | 46929200 | 4.7μF 25V E.C. |
| zC27 | 46929200 | 4.7μF 25V E.C. |
| zT1 | 46836700 | Filter |
| zVR1 | 46839500 | 4.7kΩ S.V.R., SK Ind. |
| zVR2 | 46839600 | 10kΩ S.V.R., VCO adj. |

# 5. EXPLODED VIEW & PARTS LIST OF MECHANISM ASS'Y



• Though every part included in mechanism ass'y is numbered in exploded view, parts unlisted in the parts list are not supplied.

**Parts List**

| Parts No. | Stock No. | Description |
|---|---|---|
| 1 | 37038000 | Main Chassis Ass'y |
| 2 | 37038100 | Flywheel Ass'y |
| 3 | 37038200 | Reduction Gear |
| 4 | 37038300 | Idler Pulley |
| 5 | 37038400 | Reduction Gear (D) |
| 6 | 37038500 | T.U. Rellay Gear |
| 7 | 37038600 | Convert Arm |
| 8 | 37038700 | Detecter |
| 9 | 37038800 | T.U. Pulley |
| 10 | 37038900 | Linkage Selector |
| 11 | 37039000 | Selector Gear |
| 12 | 37039100 | Selector Gear Lever |
| 13 | 37039200 | T.U. Gear Ass'y |
| 15 | 37039300 | Ratchet |
| 16 | 37039400 | FF Idler Gear Ass'y |
| 17 | 37039500 | REW Idler Gear Ass'y |
| 18 | 37039600 | Switch Actuater |
| 19 | 37039700 | Cam Gear |
| 20 | 37039800 | Reel Gear Ass'y |
| 21 | 37039900 | Friction Disk |
| 22 | 37040000 | EJECT Arm |
| 23 | 37040100 | Leaf Switch |
| 24 | 37032401 | Micro Switch |
| 25 | 37040200 | Slide Switch |
| 26 | 37040300 | Leaf Switch |
| 27 | 37040400 | Head |
| 29 | 37040600 | EJECT Lock Lever |
| 30 | 37040700 | Slide Chasiss Collar |
| 31 | 37040800 | Gear Arm Collar |

| Parts No. | Stock No. | Description |
|---|---|---|
| 32 | 37040900 | Convert Arm Collar |
| 33 | 37041000 | Sub Belt |
| 34 | 37041100 | Main Belt |
| 35 | 37041200 | Disk Washer |
| 36 | 37041300 | Pin Pivot |
| 38 | 37041400 | Motor Ass'y |
| 45 | 37041500 | Pinch Roller Ass'y (FWD) |
| 46 | 37041600 | Pinch Roller Ass'y (REV) |
| 58 | 37041700 | Link Detector Ass'y |
| 59 | 37041800 | FF/REW Link |
| 60 | 37041900 | PROGRAM Link |
| 61 | 37042000 | Torsion Spring |
| 62 | 37042100 | Gear Arm Spring |
| 63 | 37042200 | Ratch Plate Spring |
| 64 | 37042300 | EJECT Lever Spring |
| 65 | 37042400 | Head Adj. Spring |
| 66 | 37042500 | Arm Ratchet Spring |
| 67 | 37042600 | PROGRAM Link |
| 68 | 37042700 | FF Idler Gear Spring |
| 69 | 37042800 | EJECT Arm Spring |
| 70 | 37042900 | Pinch Roller Spring (FWD) |
| 71 | 37043000 | Pinch Roller Spring (REV) |
| 72 | 37043100 | Ratch Lever Spring |
| 73 | 37043200 | PROGRAM Lever Spring |
| 74 | 37043300 | Back Tension Spring |
| 75 | 37043400 | EJECT Lever Roller |
| 76 | 37035801 | Cassette Holder Spring |
| 77 | 37043500 | Rubber Stopper |
| 79 | 37043600 | Bracket Collar |

| Parts No. | Stock No. | Description |
|---|---|---|
| 80 | 37043700 | Washer $\phi$2.6x5x0.3 |
| 81 | 37043800 | Ering $\phi$=1.6 |
| 82 | 00489000 | Ering $\phi$=2.0 |
| 83 | 08322600 | Ering $\phi$=2.5 |
| 84 | 37047800 | Binding Head Screw M1.7x6 |
| 85 | 37048000 | Binding Head Screw M2.6x10 |
| 86 | 37035901 | Binding Head Screw M1.7x5.5 |
| 87 | 37044000 | Flat Counter Sunk Head Screw M2x4 |
| 88 | 37048100 | Flat Counter Sunk Head Screw M2x5 |
| 89 | 37044200 | Flat Counter Sunk Head Screw M2.6x3 |
| 90 | 37044100 | Binding Head Screw M2.6x5 |
| 91 | 37036401 | Binding Head Screw M2.6x8 |
| 92 | 00420600 | Binding Head Screw M2x6 |
| 93 | 37044300 | Flat Counter Sunk Head Screw M2x5 |
| 94 | 00420600 | Binding Head Screw M2x4 |
| 95 | 37044400 | Pan Head Tapping Screw M2x14 |
| 96 | 37036701 | Poly Washer $\phi$1.2x$\phi$3xt0.25 |
| 97 | 37036801 | Poly Washer $\phi$1.6x$\phi$3.2xt0.25 |
| 98 | 37047600 | Poly Washer $\phi$2.1x$\phi$3.5xt0.25 |
| 99 | 37036901 | Poly Washer $\phi$2.1x$\phi$3.5xt0.25 |
| 100 | 37044600 | Poly Washer $\phi$1.7x$\phi$3.2xt0.13 |
| 101 | 37044700 | Binding Head Screw M1.4x4 |
| 114 | 37047500 | Poly Washer $\phi$1.6x$\phi$3.2xt0.3 |
| 115 | 37048500 | Poly Washer $\phi$1.6x$\phi$3.2xt0.5 |

RX-4010/4010L/4010F
RX-3010/3010L/3010F

# 6. MAIN PARTS REPLACEMENT

### A. Mechanism Ass'y (See exploded view on page 21)

1) Loosen three screws ① to remove bonnet.
2) Remove volume knob and fader knok (RX-4010•4010L•4010F•3010) or balance knob (RX-3010L•3010F).
3) Loosen two screws ⑭ to remove front panel ass'y with G-2001 board.
4) Unsolder two points on SW R.C.B. (two wires from G-2001, refer to overall wiring diagram on page 20).
5) Loosen three screws ③ ⑧ to remove mechanism ass'y.
6) Pluck out two connectors.

### B. Cassette Hunger ㊽•Cassette Holder ㊻ (See Fig. 6-1)

1) Push the EJECT Knob.
2) Undo Stopper Ⓐ of main chassis ass'y.
3) Remove Pin Pivot ㊱ from main chassis ass'y.
4) Push the Cassette Hunger and Cassette holder to arrow direction ①.
5) Lift up the cassette hunger and cassette holder to arrow direction ②.
6) Remove the cassette hunger and cassette holder from main chassis Ass'y.

### C. Flywheel Ass'y ②. (See Fig. 6-1)

1) Perform "B. Cassette Hunger ㊽. Cassette Holder ㊻".
2) Remove Ering ㊶ and Poly Washer ㊽.
3) Pull out the Flywheel Ass'y to down ward.

### D. Reel Gear Ass'y ⑳ (See Fig. 6-2)

1) Perform "B. Cassette Hunger ㊽. Cassette Holder ㊻".
2) Remove Ering ㊸ fixing seesaw Lever ㊼. (REW Reel Gear Ass'y)
3) Remove Poly washer ㊻ and Pull out the reel gear Ass'y.

### E. Head ㉗. Pinch Roller Ass'y (FWD) ㊺•Pinch Roller Ass'y (REV) ㊻ (See Fig. 6-1 and Fig. 6-3)

1) Perform "B. Cassette Hunger ㊽•Cassette Holder ㊻".
2) Remove Spring ㊹ from main chassis Ass'y.
3) Remove a screw ㊶-a fixing bracket (R) ㊹.
4) Remove a screw ㊿ fixing, hunger bracket ㊷.
5) Remove a screw ㊺ fixing bracket (R) ㊹.
6) Remove a screw ㊶-a fixing, hunger bracket ㊷.
7) Remove Idler Pully ④ and Reduction gear ③.
8) Remove a screw ㊼ fixing eject arm ㉒.
9) Remove eject lever ㊵ and bracket hunger ㊷ from main chassis ass'y.
10) Remove two screw ㊼ fixing Top Bracket Ass'y ㊶.
11) Remove the head adjusting screw ㊾ and Head.
12) Remove E-type washer ㊷ stoping Pinch Roller Ass'y.

* When installing the eject lever, bracket hanger and etc., perform above procedure for their removal in reverse.

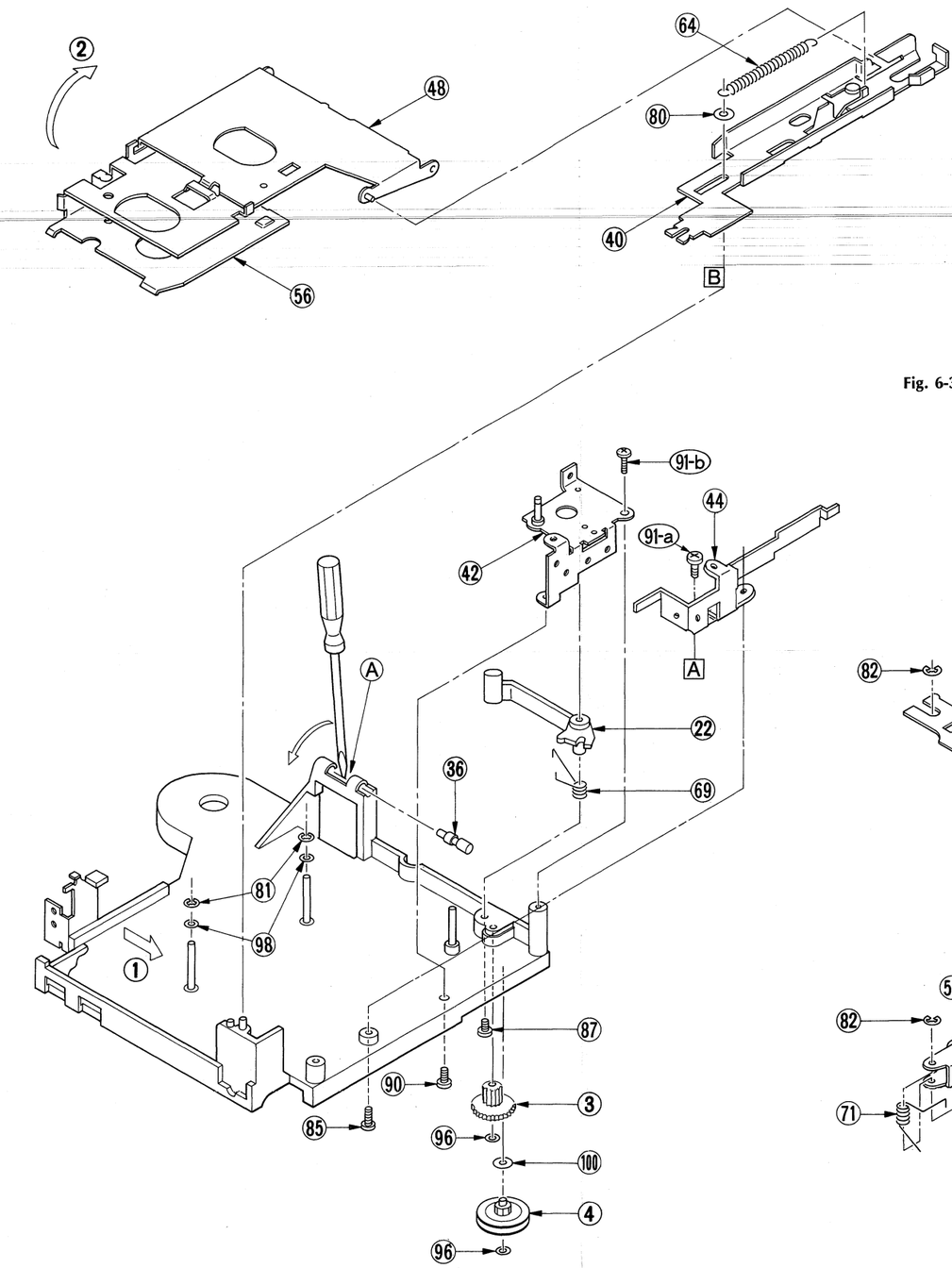
### F. FF Idler Gear Ass'y ⑯•REW Idler Gear Ass'y ⑰ (See Fig. 6-3)

1) Perform "E. Head ㉗•Pinch Roller Ass'y (FWD) ㊺ etc. 1)~9)".
2) Remove Ering ㊷ fixing Slide chassis ㊸.
3) Remove Slide chassis ㊸ from main chassis ass'y.
4) Remove a screw ㊾ fixing earth plate ㊸.
5) Remove earth plate and push lever ㊸.
6) Remove idler Gear spring ㊽ from idler gear ass'y.

### G. Selector Gear ⑪

1) Perform "F. FF Idler Gear Ass'y ⑯•REW Idler Gear Ass'y ⑰ 1)~3)".
2) Remove linkage Selector ⑩.
3) Pull out the Selector gear ⑪.

Fig. 6-1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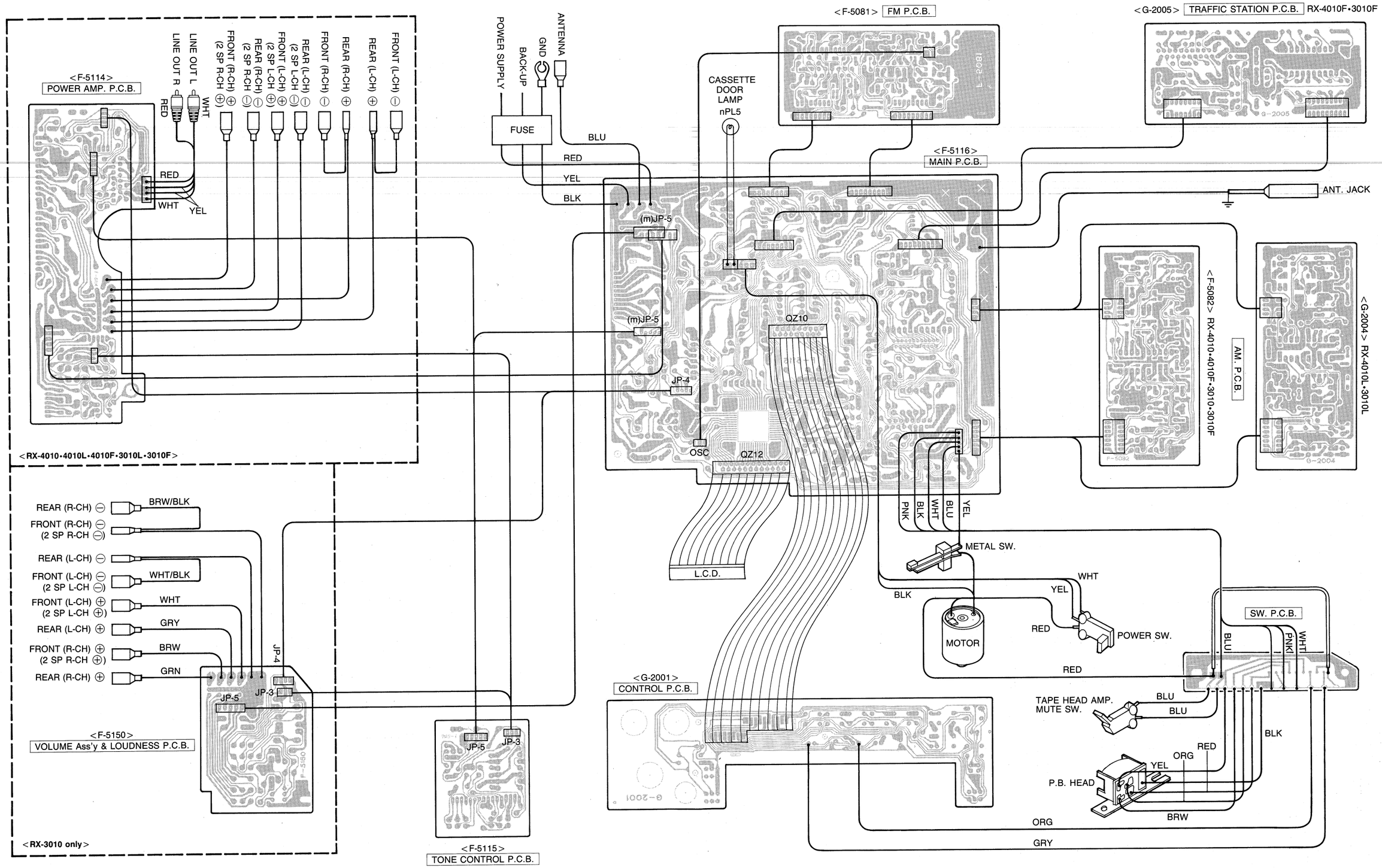
RX-4010/4010L/4010F
RX-3010/3010L/3010F

# 7. OVERALL WIRING DIAGRAM



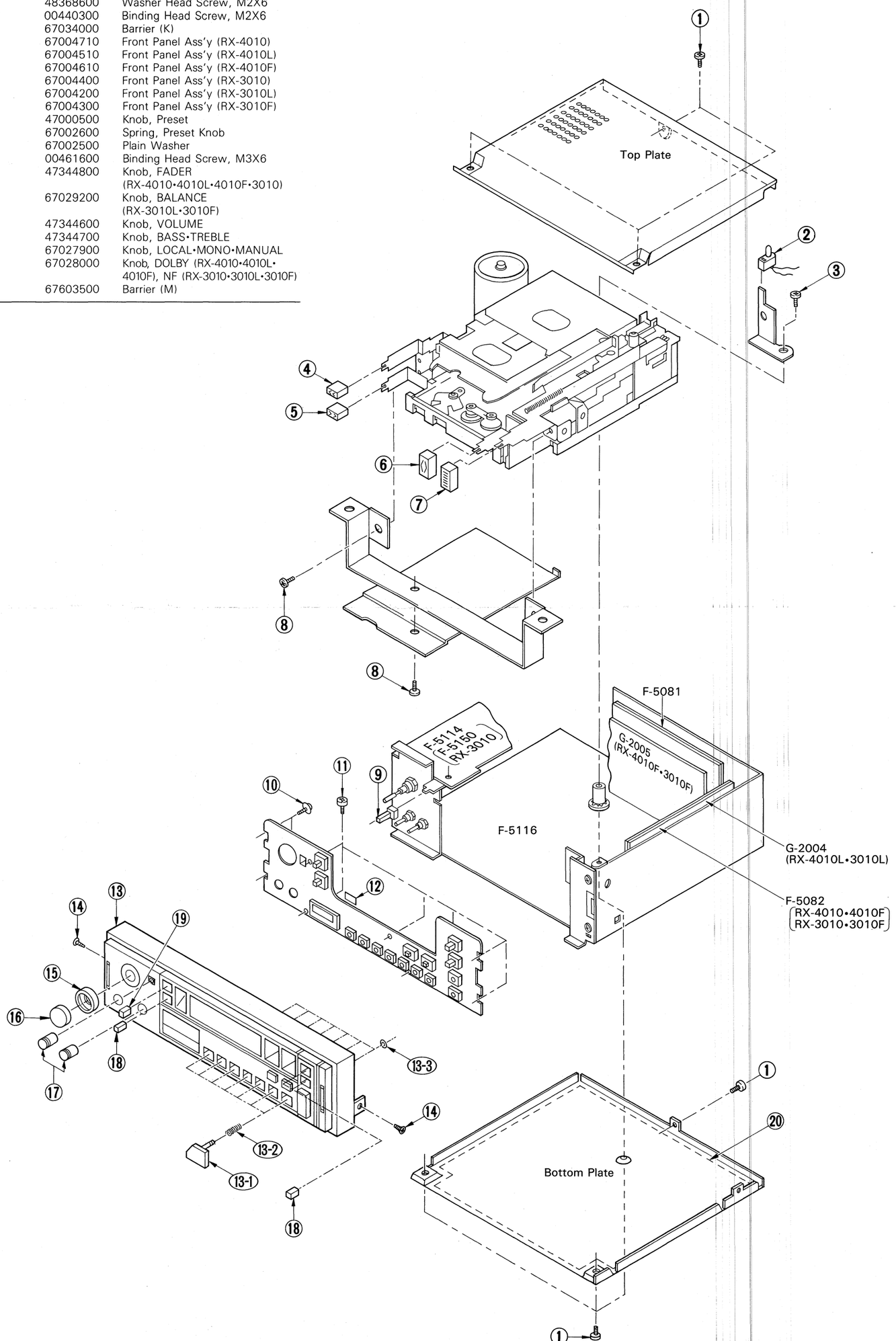
# 8. OTHER PARTS

## 8-1. EXPLODED VIEW I



**Parts List**

| Parts No. | Stock No. | Description |
|---|---|---|
| 1 | 46933600 | Binding Head Screw, M3X4 |
| 2 | 48279400 | Pilot Lamp with cap |
| 3 | 48306500 | Binding Head Screw, M2.6X12 |
| 4 | 67000000 | Knob, REW |
| 5 | 67000700 | Knob, FF |
| 6 | 67000100 | Knob, PROGRAM |
| 7 | 67000200 | Knob, EJECT |
| 8 | 07756900 | Binding Head Screw, M2.6X4 |
| 9 | 67001000 | Knob, LOUDNESS |
| 10 | 48368600 | Washer Head Screw, M2X6 |
| 11 | 00440300 | Binding Head Screw, M2X6 |
| 12 | 67034000 | Barrier (K) |
| 13 | 67004710 | Front Panel Ass'y (RX-4010) |
| | 67004510 | Front Panel Ass'y (RX-4010L) |
| | 67004610 | Front Panel Ass'y (RX-4010F) |
| | 67004400 | Front Panel Ass'y (RX-3010) |
| | 67004200 | Front Panel Ass'y (RX-3010L) |
| | 67004300 | Front Panel Ass'y (RX-3010F) |
| 13-1 | 47000500 | Knob, Preset |
| 13-2 | 67002600 | Spring, Preset Knob |
| 13-3 | 67002500 | Plain Washer |
| 14 | 00461600 | Binding Head Screw, M3X6 |
| 15 | 47344800 | Knob, FADER (RX-4010•4010L•4010F•3010) |
| | 67029200 | Knob, BALANCE (RX-3010L•3010F) |
| 16 | 47344600 | Knob, VOLUME |
| 17 | 47344700 | Knob, BASS•TREBLE |
| 18 | 67027900 | Knob, LOCAL•MONO•MANUAL |
| 19 | 67028000 | Knob, DOLBY (RX-4010•4010L•4010F), NF (RX-3010•3010L•3010F) |
| 20 | 67603500 | Barrier (M) |

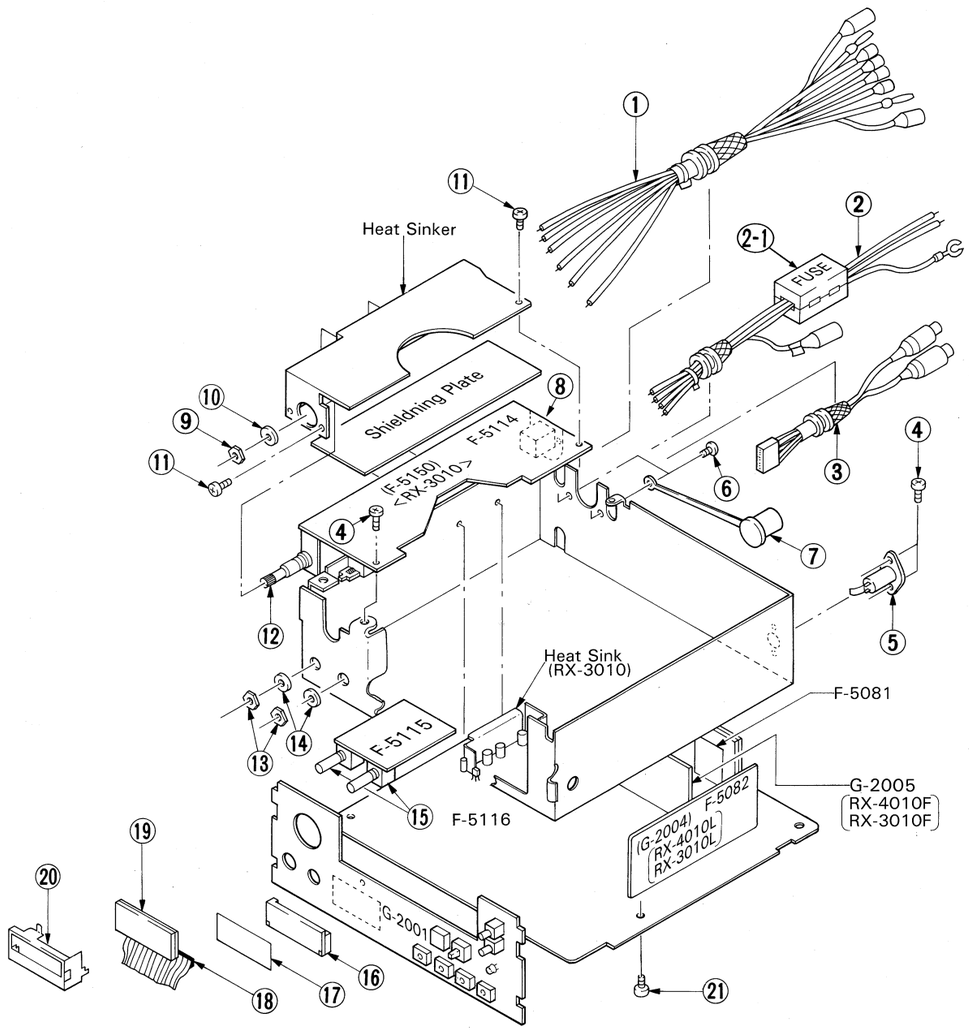


RX-4010/4010L/4010F
RX-3010/3010L/3010F

## 8-2. EXPLODED VIEW II

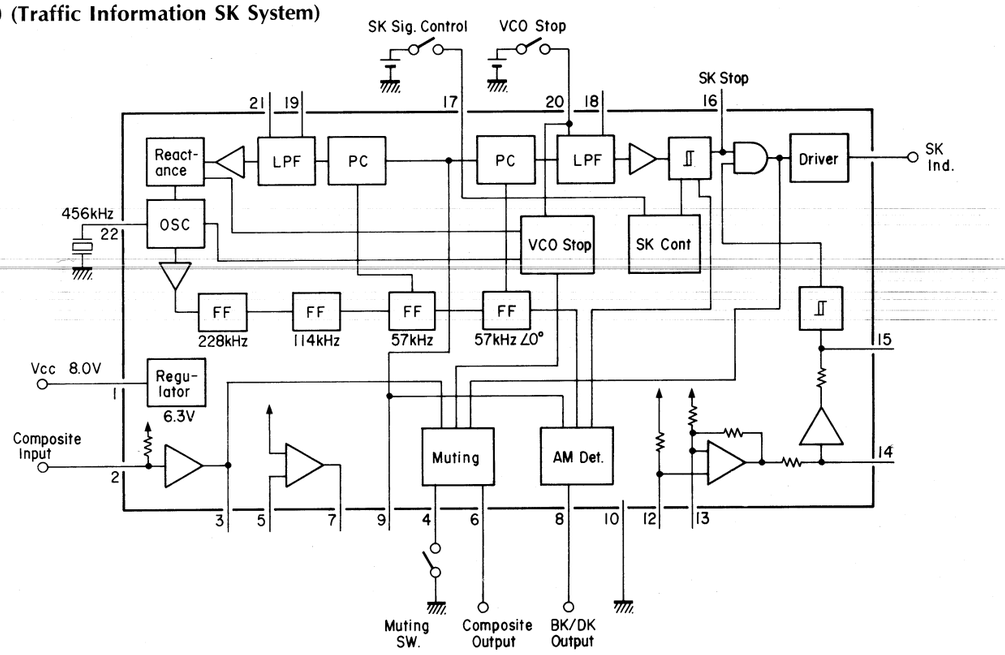
**Parts List**

| Parts No. | Stock No. | Description |
|---|---|---|
| 1 | 48274000 | SP Cord Ass'y (RX-4010•4010L•4010F) |
| | 48273900 | SP Cord Ass'y (RX-3010) |
| | 48277800 | SP Cord Ass'y (RX-3010L•3010F) |
| 2 | 48273800 | Cord Ass'y with filter |
| 2-1 | 48000200 | 5A Fuse |
| 3 | 48305900 | Pin Plug Cord with connector (RX-4010•4010L•4010F) |
| 4 | 46267700 | Binding Head Screw, M3X6 |
| 5 | 48272400 | Jack, ANTENNA |
| 6 | 00461600 | Binding Head Screw, M3X8 |
| 7 | 46610100 | Short Plug (RX-4010•4010L•4010F•3010L•3010F) |
| 8 | 46852400 | Din Jack (RX-4010•4010L•4010F•3010L•3010F) |
| 9 | 07105700 | M8 Hexagon Nut, volume |
| 10 | 07106300 | M9 Plain Washer, volume |
| 11 | 46267800 | Binding Head Screw, M3X8 |
| 12 | 48274300 | VOLUME Ass'y (RX-4010•4010L•4010F) |
| | 46837800 | VOLUME Ass'y (RX-3010) |
| | 48274200 | VOLUME Ass'y (RX-3010L•3010F) |
| 13 | 07105600 | M7 Hexagon Nut, tone volume |
| 14 | 07106200 | M8 Plain Washer, tone volume |
| 15 | 48274100 | Volume, BASS•TREBLE |
| 16 | 47000900 | Illumination Plate |
| 17 | 67027400 | Scattered Light Film |
| 18 | 67023000 | Cushion |
| 19 | 48369500 | Liquid Crystal Display (RX-4010•3010) |
| | 48369600 | Liquid Crystal Display (RX-4010L•4010F•3010L•3010F) |
| 20 | 67002800 | LCD Holder |
| 21 | 13122300 | Binding Head Screw, M3X6 |

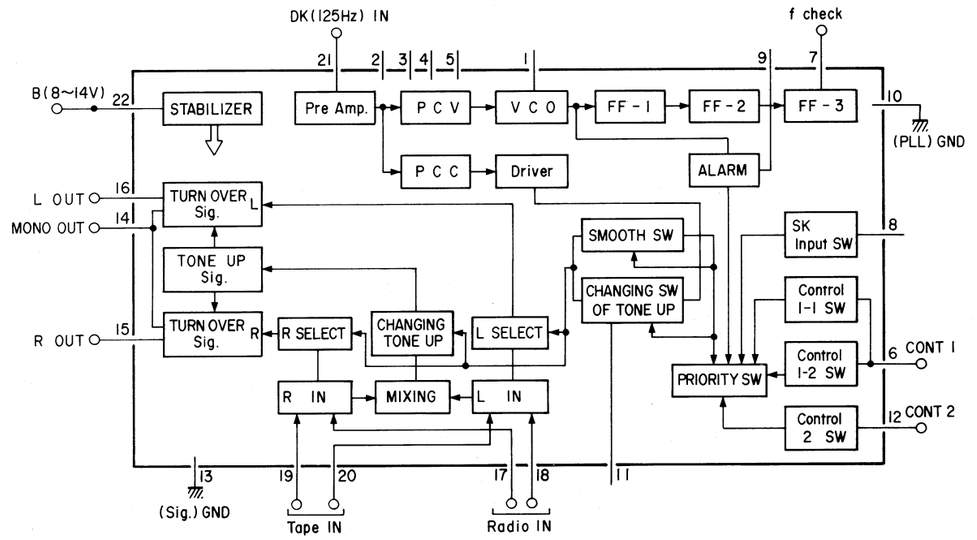



# 9. INTERIOR BLOCK DIAGRAM OF IC

**•LA2220 (Traffic Information SK System)**

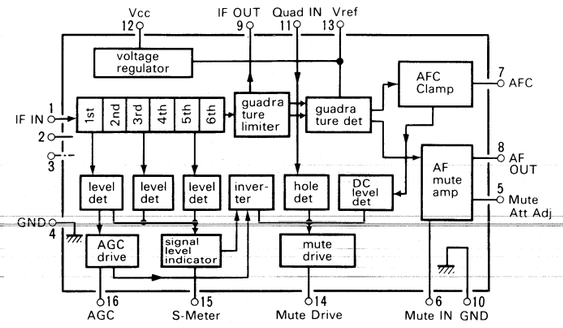



**•LA2211 (Traffic Information DK Sig. Processing)**

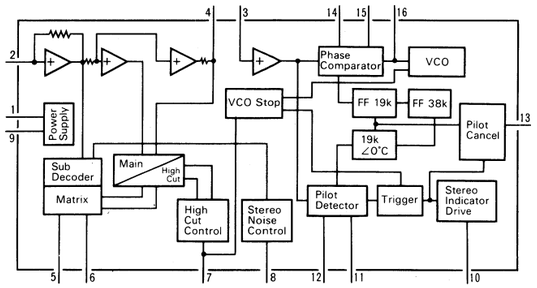


RX-4010/4010L/4010F
RX-3010/3010L/3010F

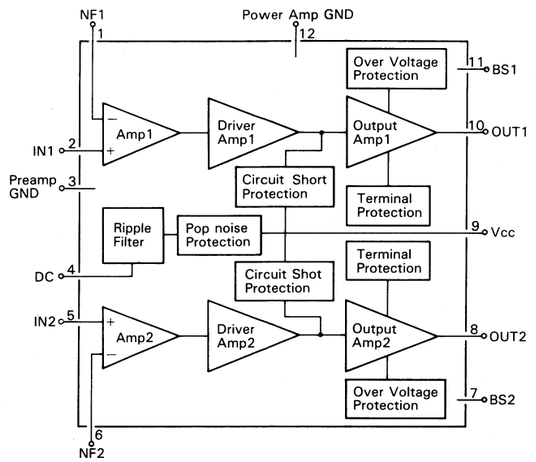
### •LA1140 (FM IF Amp. & Quadrature Detector)



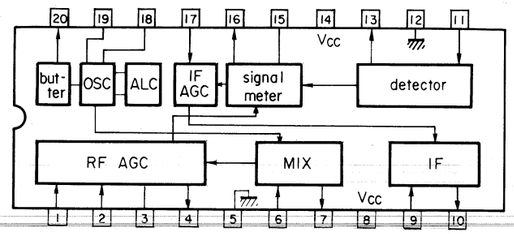

### •LA3430 (FM Stereo MPX)



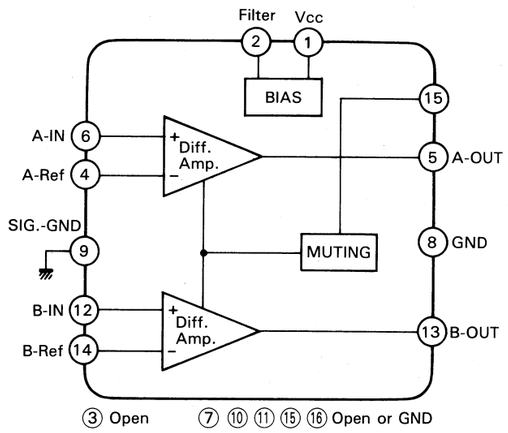

### •LA4445 <Power Amp. IC>



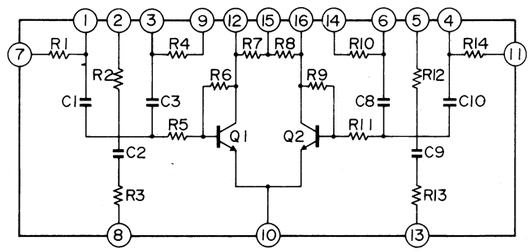

### •LA1135 <AM Tuner>



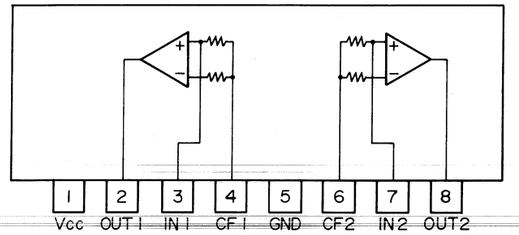

### •TA7414P (Ground Isolater)



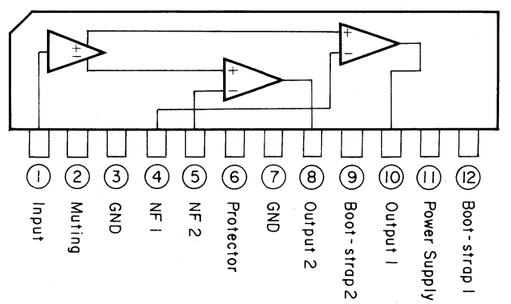

### •KC-819 (Tone Amp.)



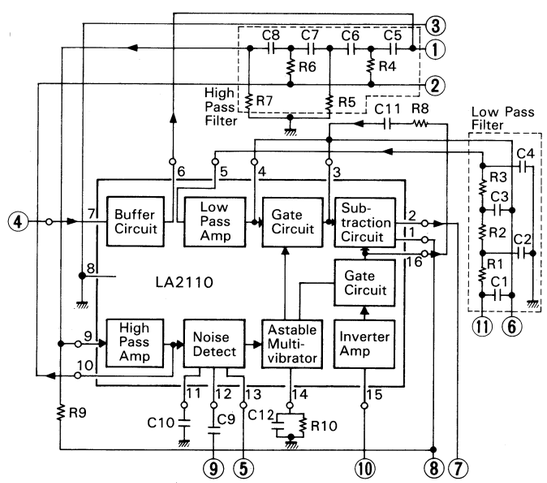

### •BA3112 (Dual Pre Amp. IC)



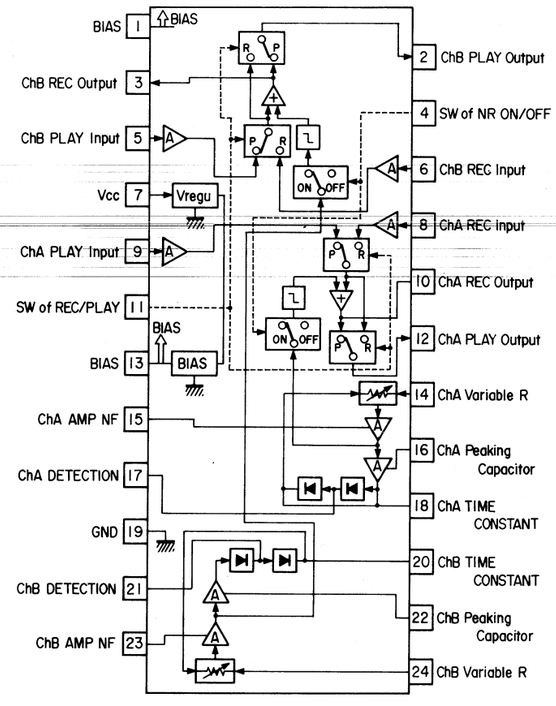

### •M51104L <BTL Power Amp.>



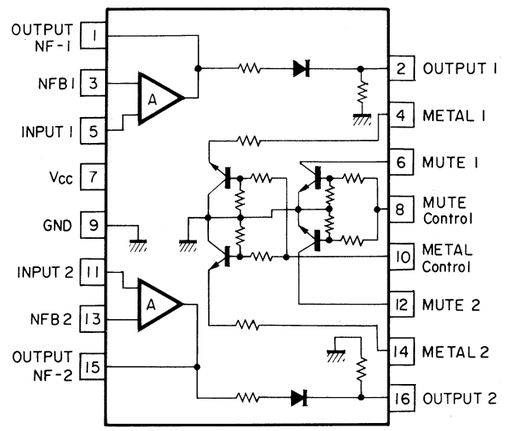

### •NC3S300 <FM Noise Canceller>




### •BA1104LS (B-type Dolby Noise Reduction)




### •BA-3406 <Dual Pre Amp.>



# 10. FUNCTION OF IC μPD1708G-213

## 10-1. Terminal Function of IC μPD1708G-213

| Pin No. | Label | Input/Output | Description |
|---|---|---|---|
| 1~4<br>34~52 | LCD4~1<br>LCD23~5 | Output<br>Output | Terminal for outputting 7-segment signal for LCD. |
| 5<br>6 | COM1<br>COM2 | Output<br>Output | Terminals for outputting displayed common signals. |
| 7<br>33 | VDD | —<br>— | Power suply terminal (+5V) connected to pin 7 and 33 internally. |
| 8 | FM | Input | Terminal for inputting a VCO signal from TR (Q01) through AC capacitor coupling. |
| 9 | AM | Input | Terminal for inputting VCO of MW and LW through AC coupling. |
| 10 | GND | — | Ground terminal |
| 11<br>12 | E01<br>E02 | Output | Terminals to output a signal from a phase comparator. These terminals can be used for FM and AM, separately, since the same signal is outputted from the terminals E01 and E02 at the same time. |
| 13 | CE | Input | Terminal for inputting a chip enable signal: normal operation at High-level, back-up operation at Low-level. |
| 15<br>16 | X2, X1 | Input<br>Output | Terminals for connecting a quartz oscillator (4.5 MHz) |
| 17 | SD | Input | Terminal for inputting Auto-Search stop. Stopped at High-level. |
| 18 | MUTE | Output | Terminal for outputting muting. Active at Low-level.<br>(1) When received signal band changes;<br>(2) When TAPE changes;<br>(3) When preset memory is called;<br>(4) When MANUAL UP/DOWN operates;<br>(5) When AUTO UP/DOWN operates;<br>(6) When AUTO SCAN operates;<br>(7) When preset memory SCAN operates. |
| 19<br>~<br>24 | K5<br>~<br>K0 | Input | Terminal for inputting a return signal of key matrix. |
| 25<br>~<br>30 | KS5<br>~<br>KS0 | Output | Terminals for outputting a source signal of key matrix. |
| 31<br><br>32 | FM BAND<br><br>AM BAND | Output | Terminal for outputting a select signal.<br>Each signals are outputted as table. |

| BAND \ Terminal | FM BAND (31) | AM BAND (32) |
|---|---|---|
| FM | 1 | 0 |
| MW | 0 | 0 |
| LW | 0 | 1 |
| VF | 1 | 1 |

(1:High Level 0:Low Level)

**Note:** Pin 14 is not used.

## 10-2. Function of MATRIX SWITCH

**•Key Matrix Table**

( ) is terminal No.

| Input Terminal / Output Terminal | K5(19) | K4(20) | K3(21) | K2(22) | K1(23) | K0(24) |
|---|---|---|---|---|---|---|
| KS5(25) | MAN UP | MAN DOWN | M1 | M2 | VF | MEMORY |
| KS4(26) | SCAN UP | SCAN DOWN | M3 | M4 | M5 | M6 |
| KS3(27) | SEEK UP | SEEK DOWN | MINADJ | HORADJ | 0ADJ | RCAL |
| KS2(28) | MODE1 | MODE0 | | LW | MW | FM |
| KS1(29) | STEREO | SK | 9N/9N+2 | NOCLOCK | PRIORITY | ROTARY |
| KS0(30) | BAND | DISLW | AMIF | AREA2 | AREA1 | AREA0 |

Momentary Switch

Alternate Switch or Transistor Switch

Momentary and Alternate Switch

Diode-matrix

Transistor Switch

Open

## 10-3. Function of Initializing Diode-matrix Switch

(1:Diode Switch is short condition 0:Diode Switch is open condition)

**Labels** | **Function**

**AREA2, AREA1, AREA0**

•Switches for selecting Area.

| AREA2 | AREA1 | AREA0 | CHANNEL STEP FREQUENCY FM/AM | CLOCK 12H/24H |
|---|---|---|---|---|
| 0 | 1 | 0 | 100K/10K | 12 |
| 0 | 0 | 0 | 50K/9K | 24 |
| 1 | 0 | 1 | *50K(display)/9K (South Africa) | 12 |

***Note:** Tunes up/down at 80 kHz steps to the frequency nearest the normal channel plan. Frequency indication is 0 when the tens place of kHz is 0 to 4, and 5 when it is 5 to 9, ignoring units place of kHz.

**9N/9N+2**

•Switch for setting LW Band Auto Stop Frequency.

| 9N/9N+2 | Auto Stop Frequency (LW Band) |
|---|---|
| 0 | 153,162,171,180,189,198..... 270,279kHz |
| 1 | 155,164,173,182,191,200..... 272,281kHz |

**NO CLOCK**

•Switch for selecting clock or no-clock mode.

| NO CLOCK | Clock/no-clock mode |
|---|---|
| 0 | Clock mode |
| 1 | No-clock mode |

**PRIORITY**

•Switch to select display priority. This switch setting is invalid when the display mode determined by MODE 0 and MODE 1 is not priority display.

| PRIORITY | Display mode |
|---|---|
| 0 | Clock priority |
| 1 | Frequency priority |

**BAND**

•Switch for selecting whether or not to set the band key to one key.

| BAND | DISLW | BAND Change |
|---|---|---|
| 1 | 0 | FM→MW→LW→ (↑) |
| | 1 | FM←MW |

**DISLW**

•Switch to disable the LW band. The LW band selection is disabled by setting this switch to ON while the BAND switch is set to ON.

## 10-4. Function of Transistor Switch

(1:Transistor Switch is ON 0:Transistor Switch is OFF)

**Labels** | **Function**

**MODE1, MODE0**

•Switch for selecting display mode.
These switches are invalid in the no-clock mode (NO CLOCK = 1).

| MODE1 | MODE0 | Display mode | Priority | IC operation | Keys accepted |
|---|---|---|---|---|---|
| 0 | 0 | Clock only | Clock only | Clock operation and memory retention | Time adjust keys and MODE 0, MODE 1 |
| 1 | 0 | Frequency and clock | Set by PRIORITY switch (Note 1) | All functions | All keys |

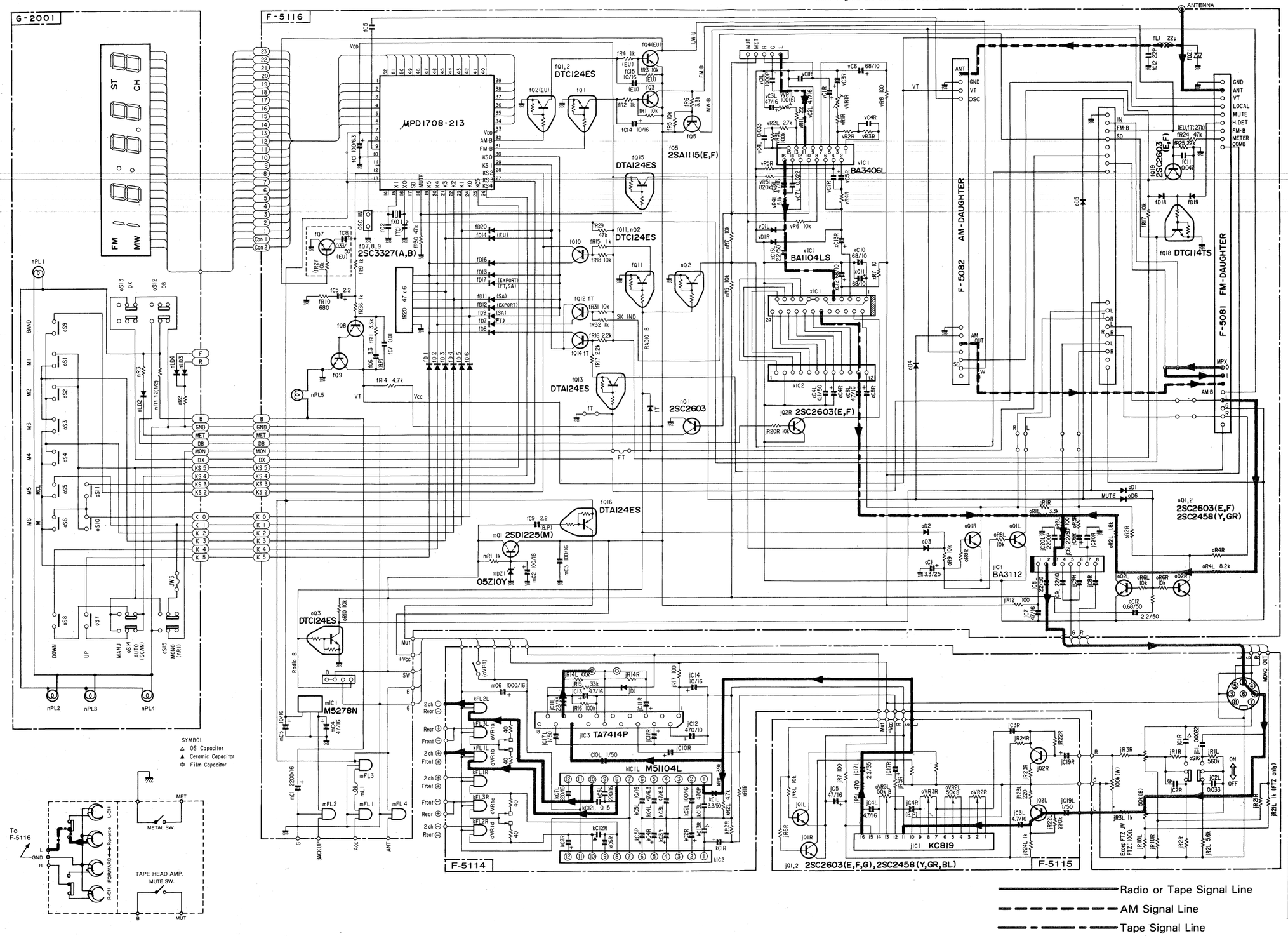
**Note:** While the priority is set to frequency, the frequency is displayed in normal operation and, when the RCAL key is pressed, the time is displayed for only 5 seconds, then the mode returns to frequency display. If the RCAL key is pressed again or any station selection key is pressed within 5 seconds after the RCAL key is pressed, the mode returns to frequency display.

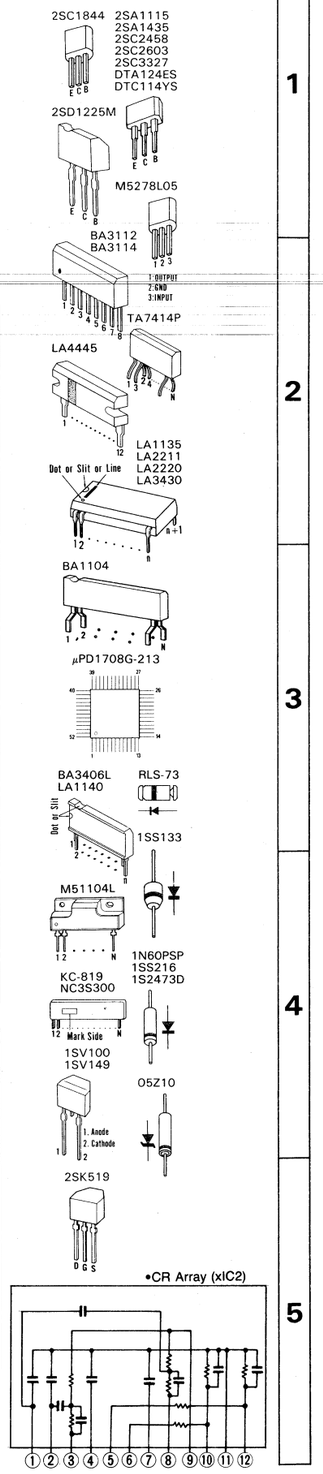
RX-4010/4010L/4010F
RX-3010/3010L/3010F

# 11. SCHEMATIC DIAGRAM

## 11-1. RX-4010 & 4010L Main Section

* Design and specifications subject to change without notice for improvement.
* La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



RX-4010/4010L/4010F
RX-3010/3010L/3010F

| A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|

## 11-2. RX-3010 Main Section

* Design and specifications subject to change without notice for improvement.
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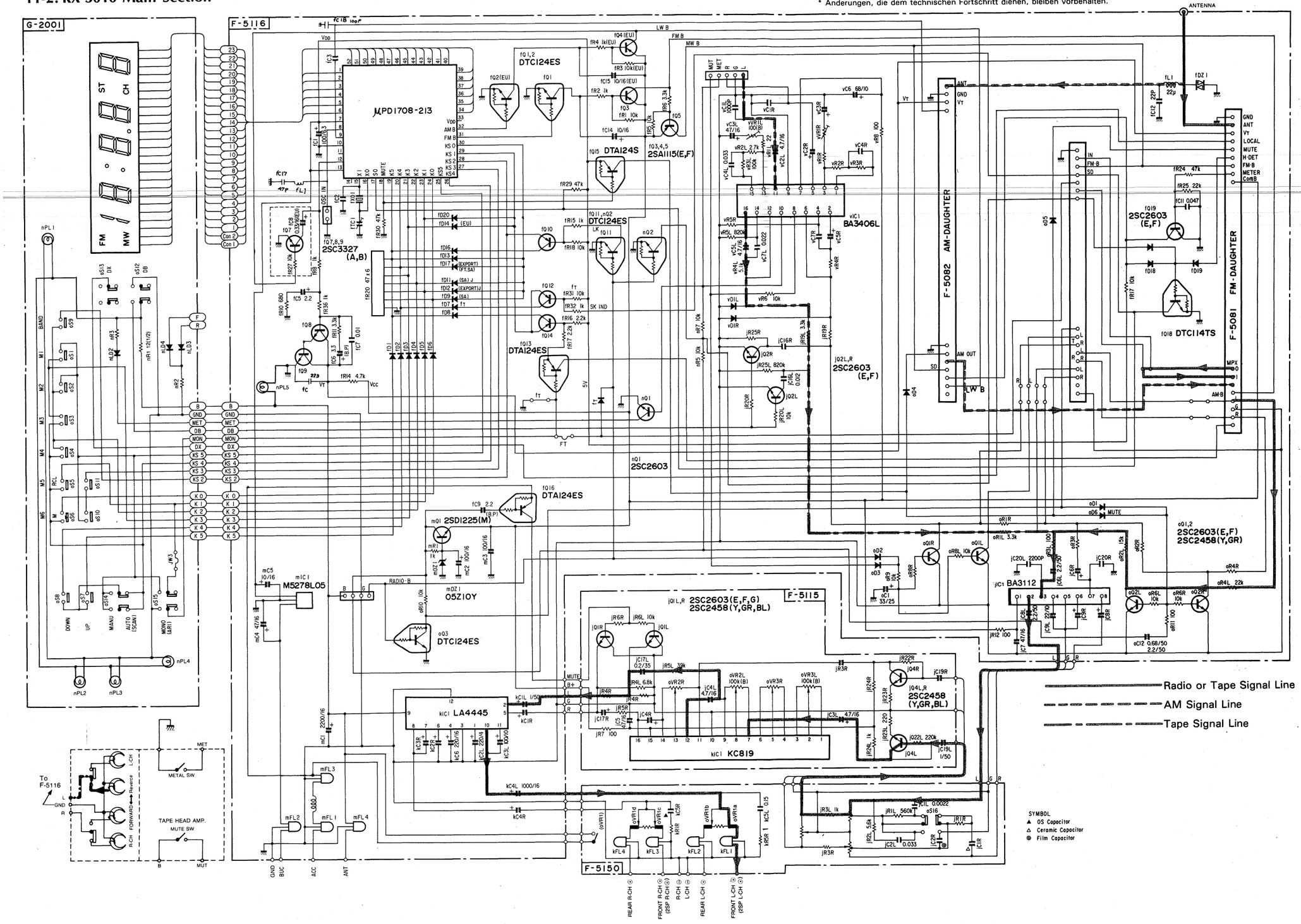
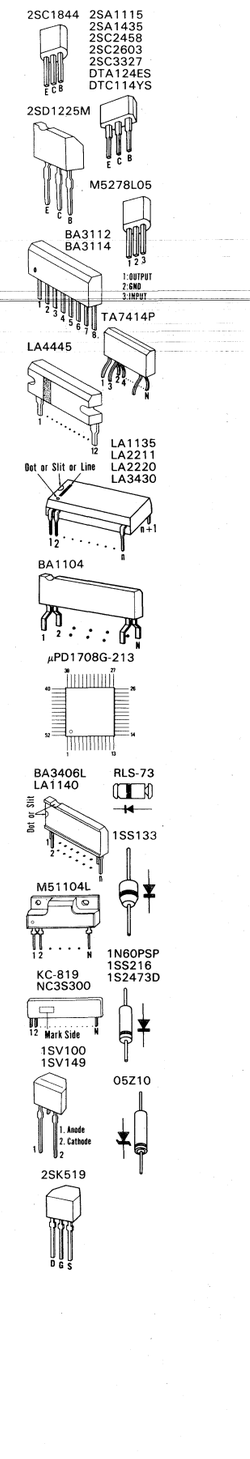
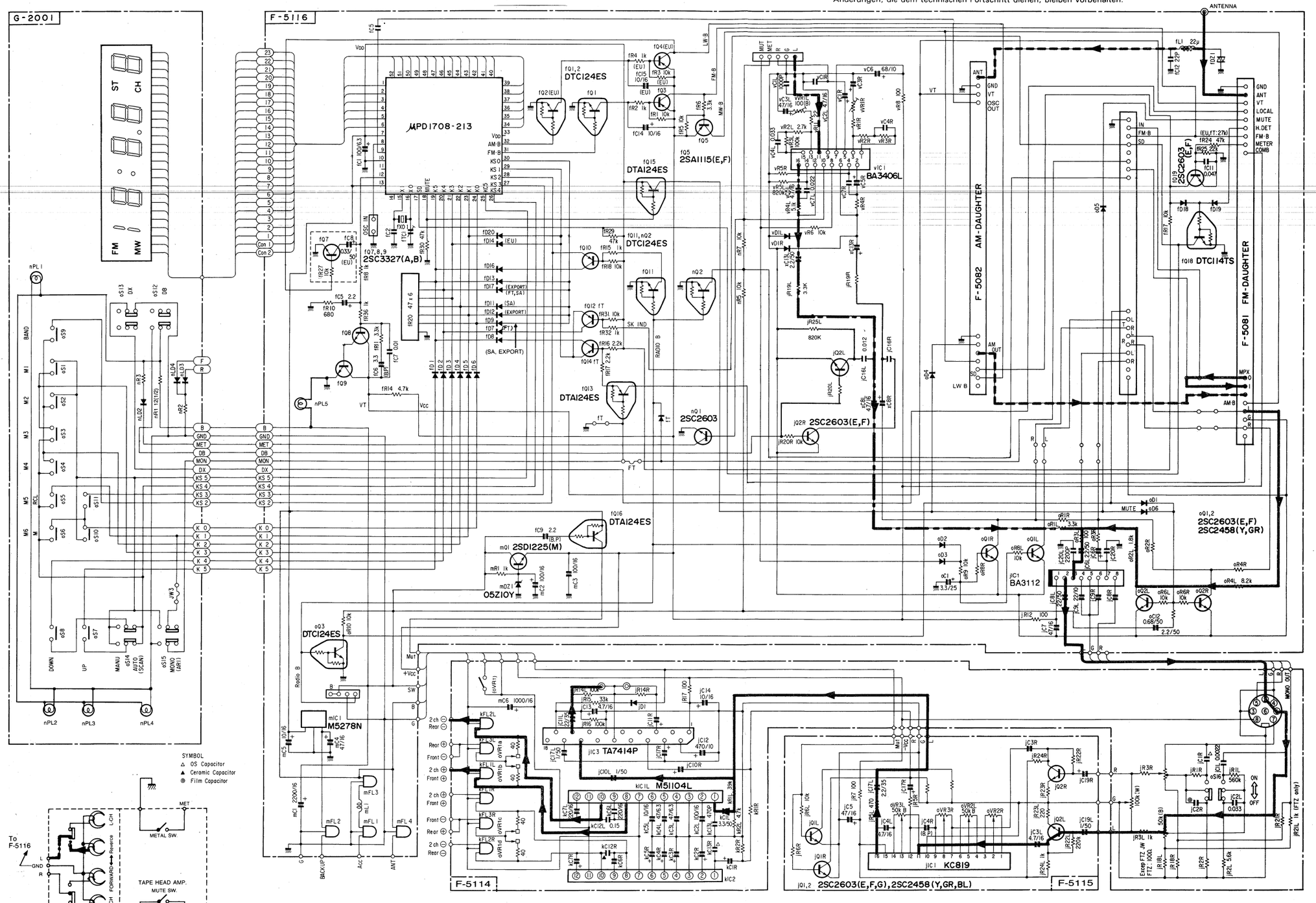
* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.

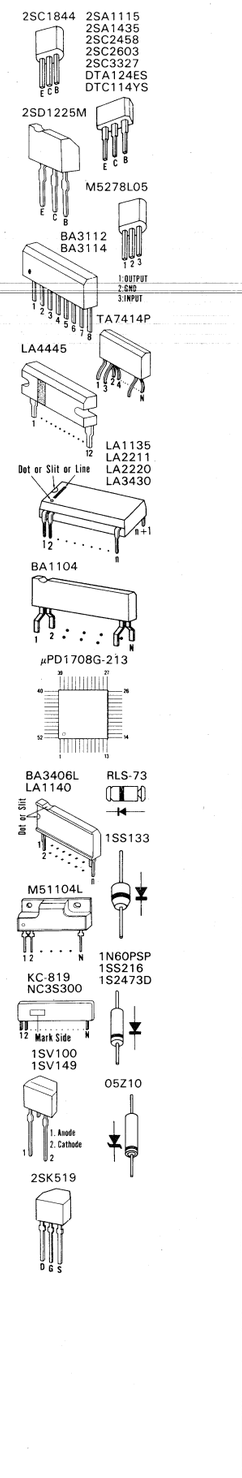


## 11-3. RX-3010L Main Section

* Design and specifications subject to change without notice for improvement.
* La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



| A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|

## 11-4. RX-3010F Main Section

* Design and specifications subject to change without notice for improvement.
* La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
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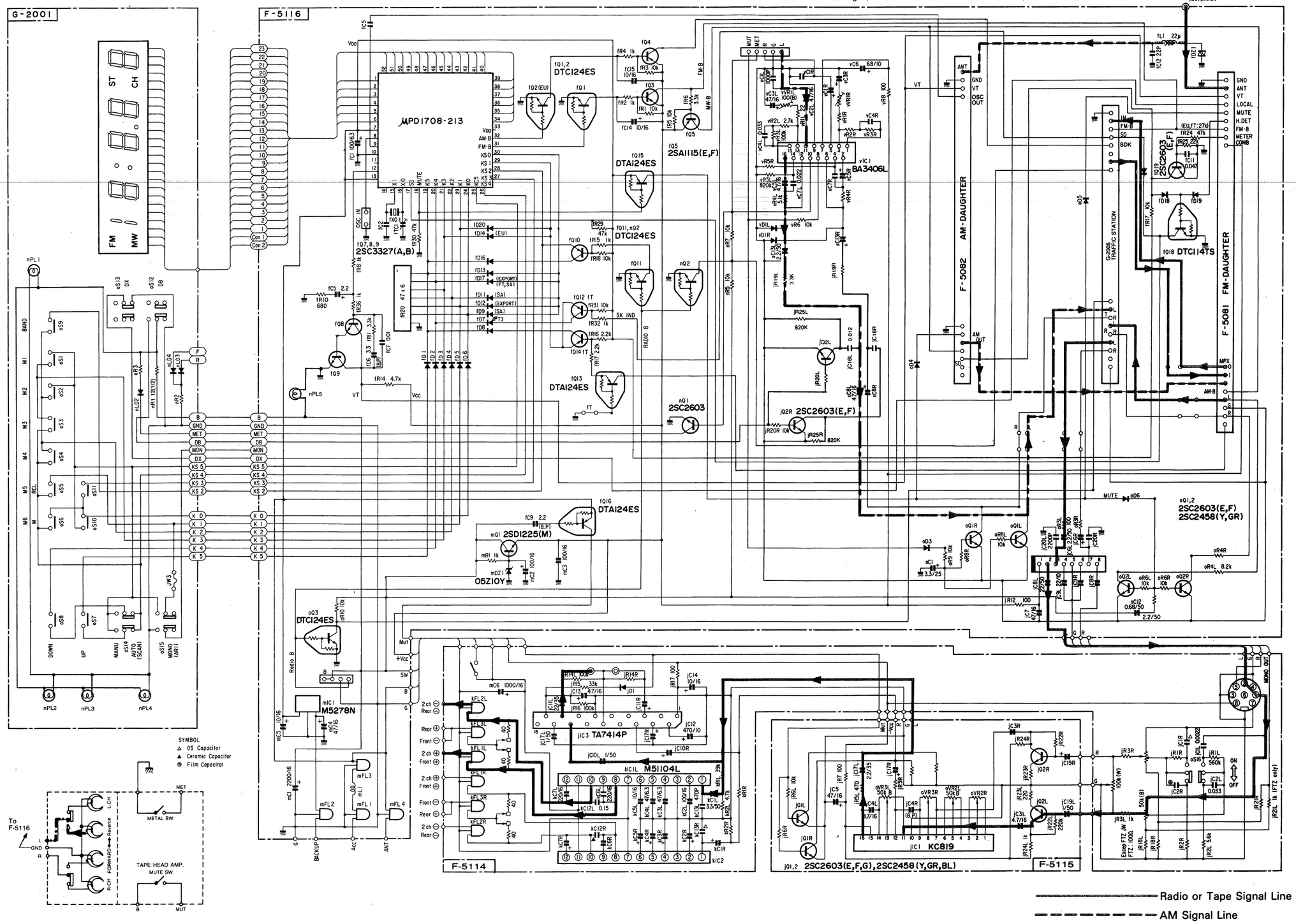


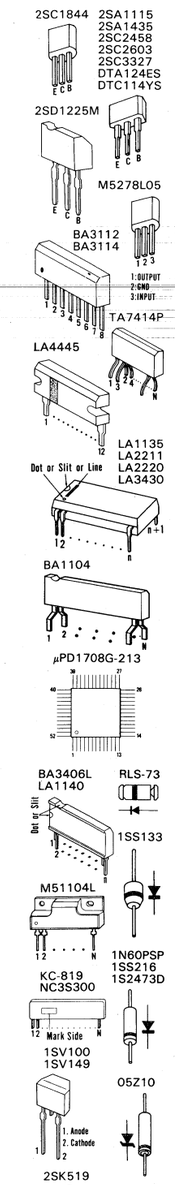

RX-4010/4010L/4010F
RX-3010/3010L/3010F

## 11-5. RX-4010F Main Section

* Design and specifications subject to change without notice for improvement.
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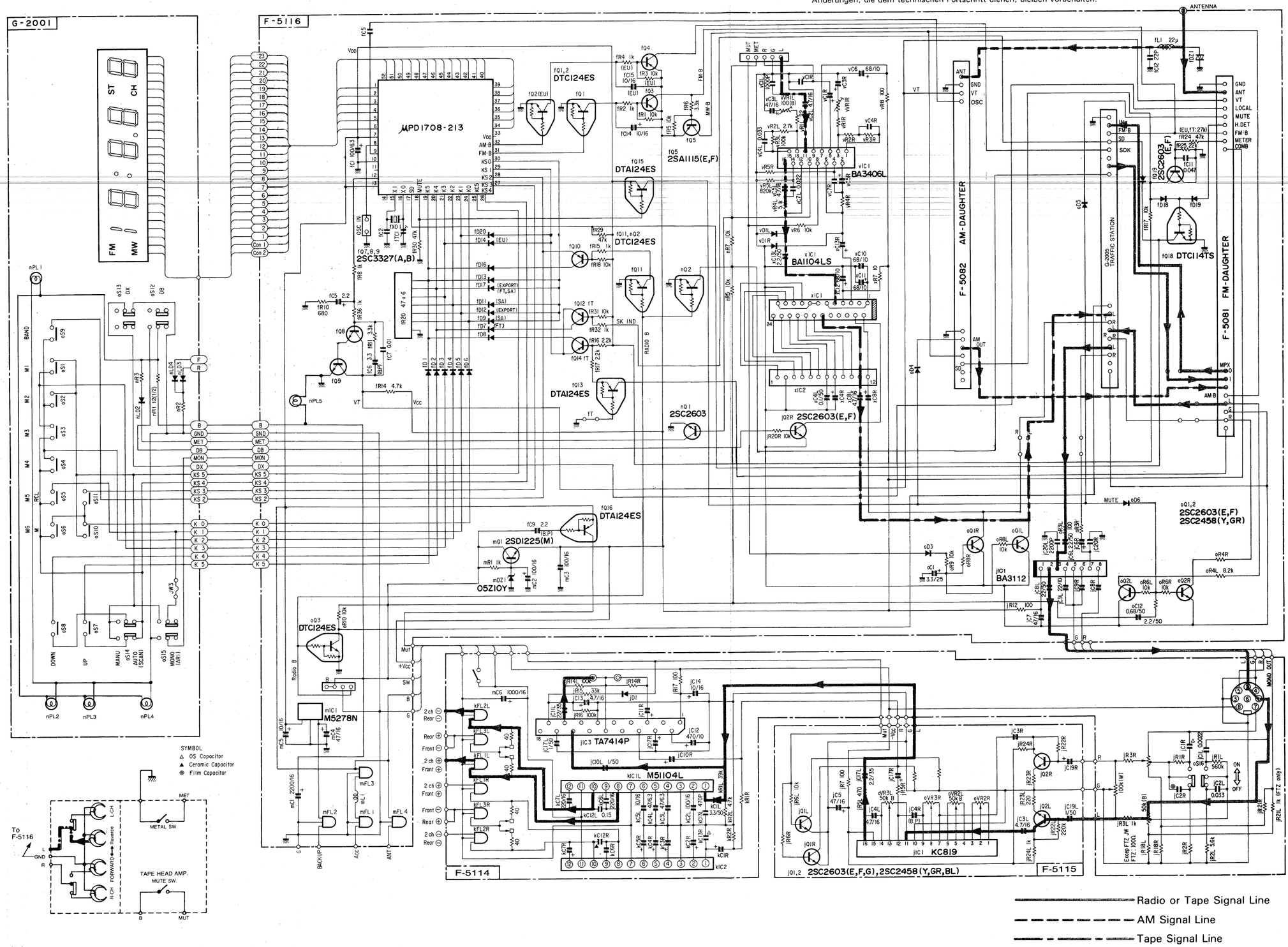


2SC1844 2SA1115
2SA1435
2SC2458
2SC2603
2SC3327
DTA124ES
DTC114YS

2SD1225M

M5278L05

BA3112
BA3114

TA7414P

LA4445

LA1135
LA2211
LA2220
LA3430

BA1104

μPD1708G-213

BA3406L
LA1140

RLS-73

1SS133

M51104L

1N60PSP
1SS216
1SS2473D

KC-819
NC3S300

1SV100
1SV149

05Z10

2SK519

•CR Array (xIC2)

RX-4010/4010L/4010F
RX-3010/3010L/3010F

## 11-6. RX-4010 & 3010 FM Section

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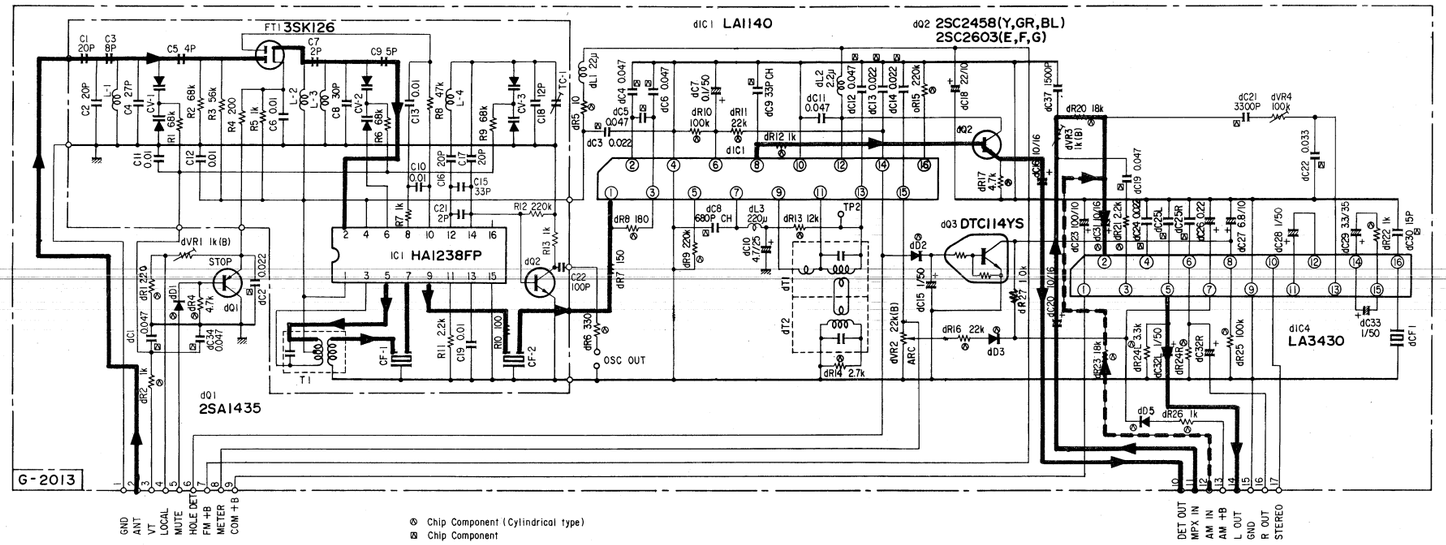
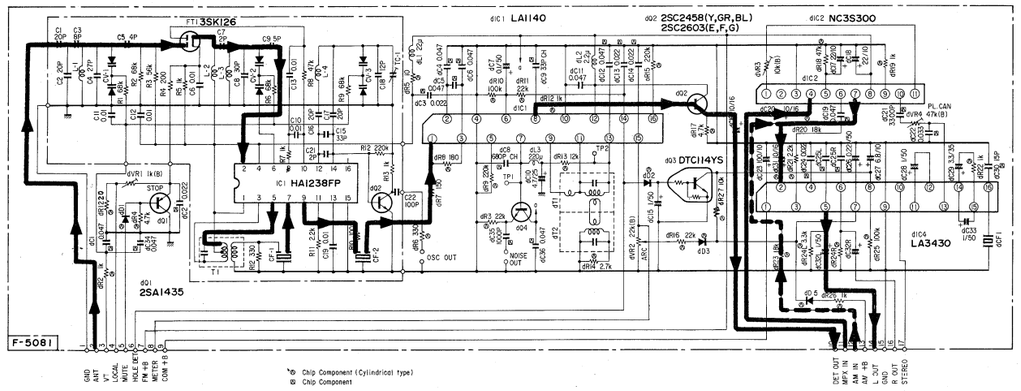
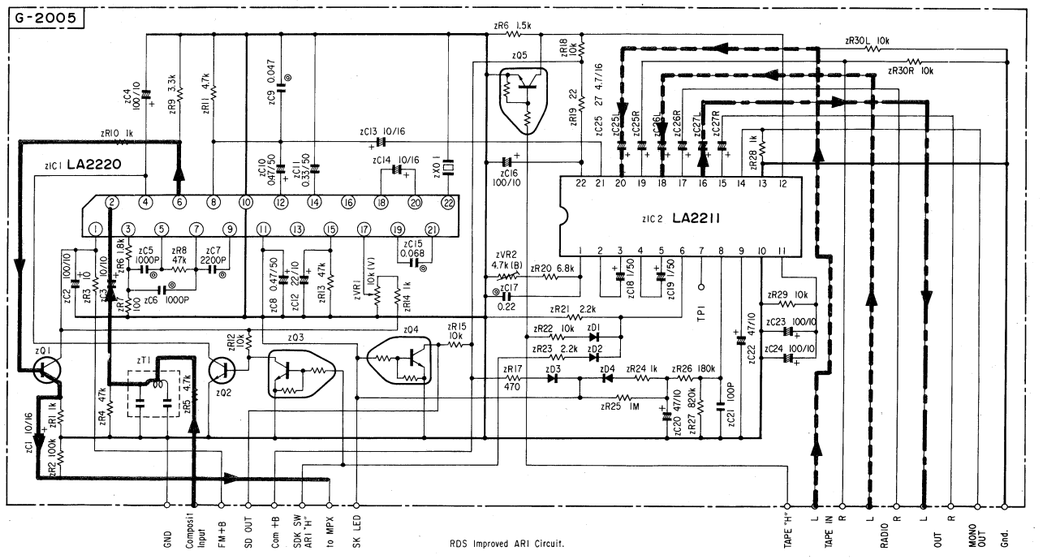



## 11-7. RX-4010L, 4010F, 3010L & 3010F FM Section




## 11-8. Traffic Station Identification Section (RX-4010F & RX-3010F)




2SC1844 2SA1115
2SA1435
2SC2458
2SC2603
2SC3327
DTA124ES
DTC114YS

2SD1225M

M5278L05

BA3112
BA3114

TA7414P

LA4445

LA1135
LA2211
LA2220
LA3430

BA1104

μPD1708G-213

BA3406L
LA1140

RLS-73

1SS133

M51104L

1N60PSP
1SS216
1SS2473D

KC-819
NC3S300

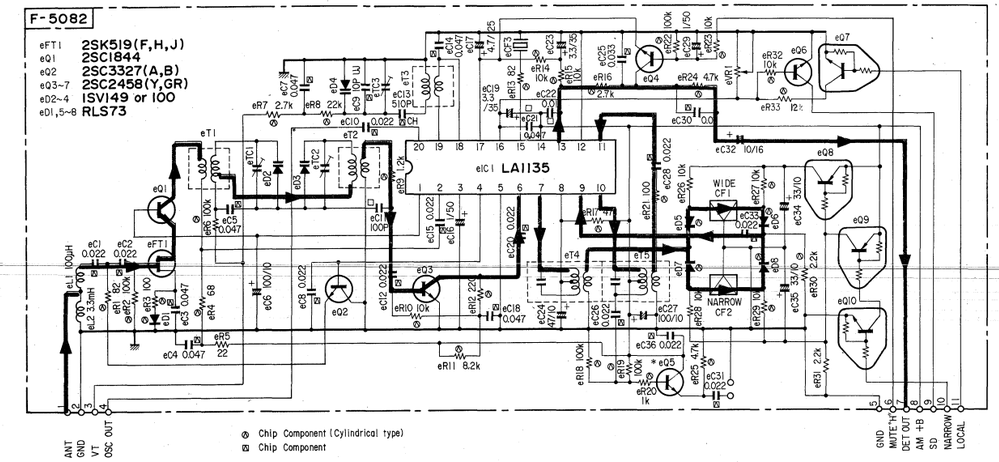
1SV100
1SV149

05Z10

2SK519

RX-4010/4010L/4010F
RX-3010/3010L/3010F

## 11-9. RX-4010, 4010F, 3010 & 3010F AM Section

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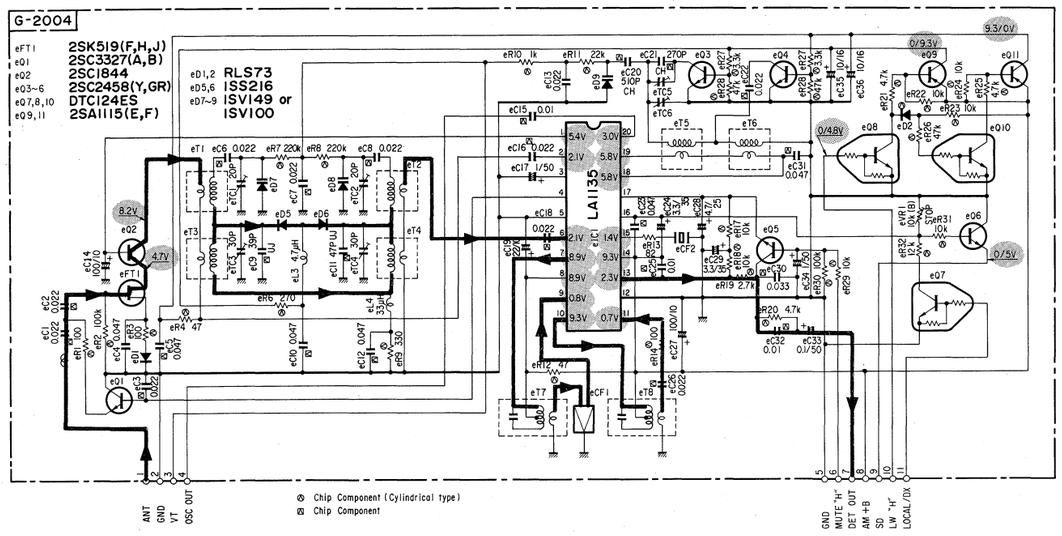
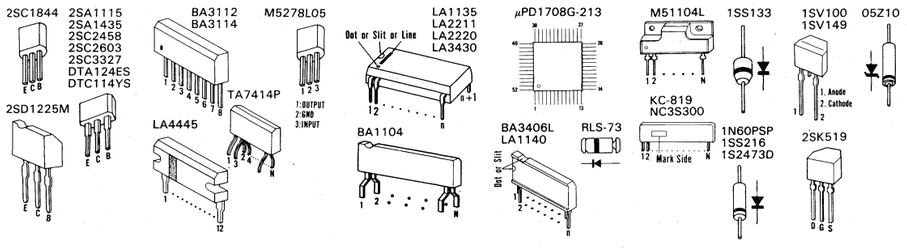
## 11-10. RX-4010L & 3010L AM Section

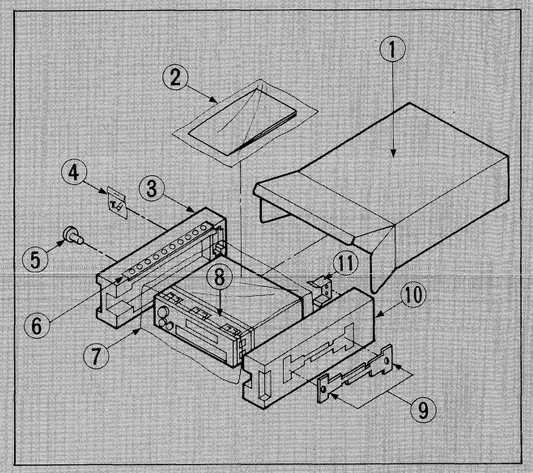





# 12. PACKING LIST

| Parts No. | Stock No. | Description |
|---|---|---|
| 1 | 67005300 | Carton Case for RX-4010 |
| | 67005100 | Carton Case for RX-4010L |
| | 67005200 | Carton Case for RX-4010F |
| | 67005000 | Carton Case for RX-3010 |
| | 67004800 | Carton Case for RX-3010L |
| | 67004900 | Carton Case for RX-3010F |
| 2 | 46977400 | Operating Instruction for RX-4010/3010 |
| | 46977500 | Operating Instruction for RX-4010L/3010L |
| | 46977600 | Operating Instruction for RX-4010F/3010F |
| 3 | 67005500 | Styrofoam Packing <Left> |
| 4 | 47483900 | Mounting Screw Ass'y |
| 5 | 47387700 | Rubber Bushing |
| 6 | 07900100 | Metal Mounting Strap |
| 7 | 47859500 | Vinyl Bag |
| 8 | 47345410 | Housing Case |
| 9 | 47348700 | Lever |
| 10 | 67005400 | Styrofoam Packing <Right> |
| 11 | 47387600 | Holder |

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